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OUR COUNTRY AND COLONIAL SUBSCRIBERS are requested to furnish any trade gossip that they may consider interesting.

Subscribers are requested to observe that, for the future, the receipt of THE CHEMIST AND DRUGGIST in a Green Wrapper indicates that with that number the term of subscription has expired, and that no further numbers will be sent until the same has been renewed. We issue the notice very respectfully, not that we distrust our Subscribers, but simply because we find it impossible to keep an immense subscription list like that we now have, extending to almost every town in the world, in order without an exact system like this.

## Editorial Notes.

WE have a few little matters of business to talk over, which we shall place before our readers as concisely as possible.

Most of our subscribers will receive this number in a green wrapper. The significance of this they will understand. We asked last year as a special favour that they would remit their subscriptions for the ensuing year as promptly as convenient, in order to facilitate our office work, and many responded. We make the same request this year, and assure our friends that we shall highly appreciate their courteous compliance with our request. The publisher will acknowledge the receipt of subscriptions by post-card if an extra halfpenny stamp is enclosed, but not otherwise.

Our "Almanack and Diary for 1871" is now ready, and we confidently recommend it to every chemist and druggist who can read English in the world. Its contents are thoroughly useful. In its pages Professor Atfield has sketched the progress of Pharmaceutical Chemistry during the past twelve months in his usual clear and masterly style; Mr. W. A. Tilden has contributed an article on the Gravimetric Test of the British Pharmacopœia, which is simply indispensable to every student and to every worker in a laboratory; and to Mr. S. W. Rich we are indebted for a wonderfully comprehensive article on Chemical Tests for Medicinal Substances, which makes this work a standard book of reference, and will enable every chemist and druggist to be in a rough way his own analyst. We also direct attention, but we cannot spare space to particularize, the mass of legal and commercial information which is here got together. The whole with the diary—"though we ses it as shouldn't say it"—forms such a perfect and extremely useful companion to the master, assistant, apprentice, or any-

one in the drug trade, that we hope to sell some thousands of them yet. Many correspondents have already complimented us on the work, and for their politeness we thank them. In cloth gilt the book is 1s. 6d.; in boards, 1s. Postage of either, 2d. extra. The best is well worth the extra sixpence. Abroad, the best copies only can be obtained, price 2s. each, from Messrs. Felton, Grimwade and Co. (Melbourne); Evans, Mercer and Co. (Montreal); Edward Row and Co. (Sydney); Kempthorne, Prosser and Co. (Dunedin); and Redington, Hostetter and Co. (San Francisco).

Readers in the United States will please take notice that we have made arrangements to be represented in New York and Philadelphia. In the Empire City, Mr. P. M. Sherwood, of 85, Liberty-street, will act for us, and Mr. Wm. M. Dickson in Philadelphia. These gentlemen are authorised to receive subscriptions and advertisements for us, and any orders given through them will obtain prompt attention at home.

We close our eleventh volume with cordial thanks for the handsome support given to us, and with a promise that in our twelfth volume we will still show ourselves desirous to promote the interests of all classes of chemists and druggists. Pharmacy is a peculiar business in this respect, that those who practise it combine commerce and science in such varying proportions that sometimes one, and sometimes the other, must predominate. We endeavour to represent both; not unsatisfactorily, we hope, as our increasing subscription list abundantly proves.

We propose to open in these columns a sort of Exchange, for the disposal and purchase of second-hand goods, surplus stock, &c., of any kind, providing only that the articles have some connection with the trade. Our object is simply to give a convenience to chemists which does not now exist; and that the column may be freely used we have fixed the fee at the very lowest to which we can go. Her Majesty's Government has set us the example of selling "ha'porths," and we follow it by charging one halfpenny per word for insertion among the exchanges. For that payment we shall also undertake to receive and transmit the correspondence relative to any article offered or asked for. Our readers will see the idea better by referring to the circular enclosed with this number, and if they want any bargains or have any to offer, we hope they will send us the particulars so that we may show off well in our first number of the next volume.

Advertisers are referred to a notice in our advertisement pages respecting the circulation of our next issue (January 14th, 1871). We would advise all who wish to communicate with the trade on any subject to avail themselves of that occasion.

The index and title-page of this volume are inserted with the present number, and will be found among the advertisements.

THE *Homœopathic World* tells its readers that it is a rule with German students never to fight a duel when the stomach is full, because they bear in mind the following anatomical facts. "Two or three fingers' breadth below the breastbone, a portion of the left lobe of the liver crosses the middle line of the body, and below the edge of the liver comes the stomach. Now when the stomach is empty and contracted, it retreats, as it were, behind the liver, and lies flat in front of the pancreas at the back of the abdomen, causing the depression termed, *the pit of the stomach*. But when the stomach is distended with food, it rises up to the front, causing a fulness where there was a depression, and



occupies more or less of the whole space between the liver and the umbilicus (navel)." There is some danger to one's health in fighting a duel on an empty stomach; but apart from that is it a fact that German students when they fight duels aim at the stomach? We hardly know whether to recommend the duel-loving portion of the community to gorge themselves and die of apoplexy, or to settle the matter more promptly by fasting and then inviting somebody to place a bullet in their silly and empty stomachs.

THE splendid example set, and maintained for many years alone, by the Midland metropolis in the annual celebration of Hospital Sunday, has been this year followed by several other large provincial towns with handsome results. We look to see the movement still more widely extended, and hope that 1871 will witness its establishment in London. Such united effort here would probably raise a sum of not less than twenty thousand pounds, and it would give an opportunity for thousands, thankful for their own health, to render some aid to their less happy fellow-creatures.

ATTENTION has more than once been drawn by some of the best pharmacutists to the excellent properties of cocoa butter for ointments, pomades, pessaries, and suppositories. On the Continent it has been employed for many years, and nearly all the cocoa butter extracted in this country is sent away for sale. Messrs. Cadbury, of Birmingham, who produce large quantities, inform us that while they can dispose of tons on the Continent at a good price, they know of no market for it in this country except the tallow-chandlers, who offer for it the price of Russian fat, and consequently do not get it. Pharmaceutical readers would do well to make a few experiments with this article.

WE notice a paragraph in the last published report of the Cancer Hospital, which we think we do right to quote. The report is signed by the eminent surgeons of the hospital, Alexander Marsden and Weedon Cooke. They write:—"We are not unmindful of suggestions which come to us at times of empirical remedies which may appear to be of any value. During the last year or two the Missisquoi water has obtained a sort of repute in this country as a remedy for cancer, and finding that many persons, subscribers to the hospital, desired to have the experience of the surgeons on the matter, we have given it a fair trial. It has been administered both internally and externally in several cases, with no favourable results in any instance. Occasionally it has seemed at first to afford relief, but in a few days the wounds would grow foul, and the loss of our own well-proved remedies was seriously felt."

The noble institution to which we have referred is worthy of the utmost sympathy. It may happen that now, or in the future, some of our readers may wish to inform sufferers of this hospital. For the possible benefit of such, we venture to add (also extracted from the report) the following:—"Regulations for the admission of patients. Out-Patients: Persons suffering from cancer are admitted as out-patients at the establishment, No. 167, Piccadilly, on Tuesdays and Thursdays, at two o'clock, and at the hospital, Brompton, on Mondays and Wednesdays, at the same hour. *No letter of recommendation is required.* In-Patients: Persons wishing to be admitted into the hospital at Brompton as in-door patients must attend on Tuesdays and Thursdays, at two o'clock, at the establishment, No. 167, Piccadilly, or at the hospital, Brompton, on Mondays and Wednesdays, at the same hour."

In our report of the Chemical Society's meeting of the past month (on another page), is given an abstract of Mr. Perkin's most recent experiments on the highly important substance anthracene, which has lately occupied so much of the attention of chemical investigation. Coal tar has already yielded such rich and varied results to the patient labours of Mr. Perkin and others, that it is no wonder that, since the production of alizarine (the colouring principle of madder) from anthracene last year, the experiments on this substance should be watched by scientific men with considerable interest. While referring to this subject, we may point out, though we shall not presume to criticise, Mr. Perkin's suggested names for certain new compounds, disulphodichloranthracenic acid, for example, and several other equally cumbrous chemical names.

Most of us are a little lower than the angels; some of us have made a very considerable descent. But the man who does the "Notes and Queries" pages in the *Lancet* is a bright and glorious exception. At the most moderate calculation he belongs to the same stratum as they, but even there, we imagine, he stands alone in the sublime rigour of his "professional rectitude." Ordinary codes of ethics are not complete enough for this beautiful paragon, so he has himself issued an eleventh commandment. Wholesale and retail patent medicine vendors read this and escape from the good man's anger if ye can!

L. B. (Nottingham.)—To be in any way associated with a secret remedy, either as prescriber, compounder, proprietor, vendor, or eulogist, is to act in direct antagonism to the first principles of professional rectitude, and in a way that calls for the most severe reprobation. Nothing is more firmly established than the duty of the practitioner to impart his knowledge freely for the general good of his brethren and mankind.

What a curious, innocent, unsophisticated little Nottingham lamb L. B. must have been, if he really did ask a question to which the above quotation was a reply. We should like to see him. If such a marvellous being does exist we hope he is convinced; we are not. But we do understand ordinary honesty, and we do not go beyond it when we say that, before deciding to set up a new standard of "professional rectitude," the proprietors of the *Lancet* should refund the money they have already received from the proprietors and vendors of a host of secret remedies. Our genial contemporary, the *San Francisco News Letter*, from whose pages we have before quoted in these, in a recent number has a short note on a subject somewhat analogous to this, and we shall, therefore, give our readers a little Californian "commercial rectitude" to balance the "professional" ditto of our London contemporary:—

"It would be exaltedly absurd to hold the proprietor of a newspaper responsible for the water-tightness of a patent washtub advertised in his journal. But if he should consider the public interest so much endangered by its sale as to justify him in denouncing it, it would be only common honesty to first refund what money he had received for former notices, and exclude the pernicious advertisement thereafter. If he choose a different course—and he usually does—he commits simple robbery, and his only justification is that he has but defrauded one whom he had previously assisted to defraud the public. We are all familiar with the lop-sided logic by which the owner of a newspaper seeks to evade the plain fact that it is not honest to take money from the man whose business he is endeavouring to ruin, but this reasoning has never been sufficiently cogent to convince men of clam sense that he is materially better than three thieves. We claim this: If a man *know* any scheme to be a swindle, and continue to advertise it in his newspaper, he is dishonest. (We habitually do this ourselves, but that does not alter the moral aspect of the question.) But if to this common form of iniquity he superadd the rare baseness of



counteracting the deceit he is paid to perpetrate, his conduct passes from the domain of simple cheating into the realm of exalted meanness."

A LETTER of considerable interest is printed on another page from our Parisian correspondent, descriptive of French pharmacy during the past two months. The graphic picture which this letter somewhat incidentally presents of the sad condition to which our so lately elegant and gay neighbour has now been reduced, is most painful to read. Our correspondent is naturally biassed towards France; we need scarcely say that it is no part of the province of this journal to enter on political subjects, certainly not to be the partizans of either of the combatants in this cruel war; but we cannot publish his denunciations of the invaders of French soil without remarking that the war itself is mainly responsible for the horror inevitably attendant on it, as on every war; and though clearly Prussia does not fight with kid gloves on, the question still remains, who is responsible for the war?

THE vacancy in the Council of the Pharmaceutical Society occasioned by the retirement of Mr. H. B. Brady, has been filled up, by the unanimous election of Mr. Williams (Hopkin and Williams), whose fitness for the post we pointed out last month. We believe, though no official announcement has yet been made, that another seat at the board is in want of an occupant. Mr. Cornelius Hanbury, who went in only last May, having resigned, or being about to do so. The election of a new member rests with the Council; they will, doubtless, choose a metropolitan, chemist, and, taking a bird's-eye view of those eligible, we cannot call to mind one whose election would be so generally popular as that of Mr. C. H. Savory. Other good names have been suggested, but presuming that Mr. Savory is still as willing to serve as he was in May, and regarding him as the representative of a firm of world-wide repute, whose antecedents indicate a liberal policy in things pharmaceutical, we hope to see a choice made which we think will be as satisfactory to outside chemists as to members of the Society.

MR. HOWDEN'S lecture on American Pharmacy at the last Pharmaceutical evening meeting was a very interesting one, and was enjoyed by a better audience than that on which we commented last month. One thing is pretty conclusively established by Mr. Howden's observations during his tour—that is, that while druggists there are in a much larger way of business than in this country, and likely in time to attain to a better social position than we hold here, their assistants are decidedly worse off than our own. The Americans take no apprentices, preferring to always hold the power of parting company. A lad receives wages from his first commencement in the trade, and when he becomes junior assistant, or clerk, as they say, will be having about £100 per annum. A senior clerk gets £200 a year, and at that figure, as a rule, he stops. On that sum he must keep himself and his wife too, if he happen to have one, with housekeeping and wardrobe expenses very much higher than in England. The practice of residing away from business, and consequently having only out-door assistants, prevails almost exclusively in the American cities; besides, the hours of business are quite as long, in many instances worse than on this side, with a liberal share of Sunday patronage. Mr. Howden observed one pharmacy in New York over which was an inscription, announcing that it was open "day and night." But the main point is the prospect

ahead, and though that is bright enough, the attainment of it seems hopeless enough to one who has to earn all he gets by being "clerk in a drug store." He would have to spend at least four times as much in stock and fixtures, and pay fully double the rent to establish himself there than would secure him an equally respectable business in England. An American gentleman by our side compliments us on our arguments, and says he does not know how they manage to do it, but, he adds, *they do*.

MR. WATSON BRADSHAW (formerly surgeon in H.M. Royal Navy) has charmingly relieved the *ennui* of the pharmaceutical world during the past month by cutting a most ridiculous figure in the columns of the *Pharmaceutical Journal*. Our contemporary very properly published a prescription furnished by a correspondent, which exhibited the manner of prescribing adopted by this surgeon. His plan is to darken his meaning to all dispensers, except to the one or more initiated, by the employment of terms understood only by them. It really is not of much consequence what Mr. Watson Bradshaw may think, or how he chooses to prescribe; he is not in the least likely to become a leader in his profession, the best of whom would heartily scorn to adopt any such practice. The publication of this prescription "amused" W. B., but the great scholar condescended to write to the journal, repudiating certain false "Latinities," and conveying the impression that "Latinity" was his strong point. Certainly, Englishity is not. This was not published, so five days after he writes as follows:—

SIR,—You have not only omitted to insert my letter, wherein I repudiated the Authorship of a Prescription full of false Latinities; but you have absolutely, in defiance of my carefully-couched protest, suffered your columns to be made the ready vehicle of a repetition of such injustice.

Understand, Sir, I consider it infinitely "infra dig." to enter the arena with such correspondents as yours appear to be, and condescend to dissert upon the squabbings of silly druggists; but when I find my name is so unblushingly paraded in your Journal, in such a mode as to serve merely to excite the cachinnations of a few ignorant readers, by identifying me with Incorrect Latinity, it is time that I should take up arms, and emphatically remind you that you are immeasurably transgressing the license of all tolerable Journalism. What right do you conceive yourself to possess to make use of my name in a private matter between my patients and myself?

My patients are invariably reminded that they can only have their medicines compounded by the especial druggists, to whom I hand them over.

I have a perfect personal right, and shall continue to exercise it whenever I think proper, of inditing my prescriptions in any mode I may deem expedient, without the risk, I should think, of subjecting myself to the Censorship of a posse of angry druggists.

You are widely over-rating your legitimate sphere of action if you consider that you have a right to dictate to the Medical Profession how they should conduct their own private affairs.

You have no right whatever to interfere with Medical Men, much less to allow your correspondents to take their names in vain.

You have been guilty of an actionable offence (Constructive Libel) in having twice allowed my name to appear in your columns under a false and invidious guise. I will not retread the ground (see last letter), but, having counsel's opinion on the subject, I have to inform you that unless you do me all just reparation for the unwarrantable manner



in which my name has introduced into your columns, I shall direct my solicitor to institute immediate legal proceedings.

I beg to observe, finally, that you have no moral or legal right to make use of my name under any pretext whatever.

Your obed<sup>t</sup>. ser<sup>t</sup>.

WATSON BRADSHAW,  
Formerly Surgeon H.M. Royal Navy.

On receipt of this the editor gave him the doubtful benefit of all the publicity he wished for—and somewhat more; for a *fac simile* of one of his prescriptions was added, which, according to our view of the duties of medical men, was simply atrocious. Out of seven ingredients *Ess. M. Pip.* was the only one about which there could be no mistake. The other articles were *Pulv. Cinerei, Ext. Laxativ, Acid. Enepnia, Ext. Nervini, Inf. Amari, and Mist. Amaræ.* In the week following Mr. Bradshaw seems to have regained his reason, and wrote a letter to the *Pharmaceutical Journal* defending his system of writing “obscure” prescriptions. This letter, decidedly the best he had written, might have been worthy of comment had it come from any other source; but Mr. Bradshaw, by his absurd insults to the trade, had previously demolished any chance which he might once have possessed of being regarded with courtesy as the champion of any medical system or code.

LADIES of a rather fussy turn of mind are generally troublesome, but not unfrequently valuable customers to the chemist and druggist. Many of our readers, however, must have opened their eyes with astonishment at the wonderful little atoms of chemical and medical lore which these persons sometimes display. There is now lying before us a paper, which is evidently one of the sources of the domestic scientific information to which we refer, and which to us, throws a considerable light on the way in which some strange fallacies originate and circulate. The *Exchange and Mart* publishes weekly an immense number of questions and answers, on every imaginable subject, but with a good number which allude to the druggist. One of the most extraordinary items in the issue we are now looking over is an answer given by A. R. F. telling somebody how to destroy rats: “Get a small quantity of arsenic, we are told, say a  $\frac{1}{4}$  oz., melt and drop it on some suet, add as much oatmeal as may be necessary. Mix the whole well. Do not on any account touch the mixture with your fingers, but with a knife or other instrument. Divide the mass, and make it up into small pills, which place on a piece of wood, and lay it down where the rats may be expected during the night. Place quite near to this a shallow dish of water. The rats will eat the pills; when the arsenic begins to cause thirst they will go to the water, and drink till they burst, and will in general be found near it in the morning. By and by the remnant will in alarm desert the locality. The arsenic pills not eaten must be carefully removed to a safe place during the day.” All our readers will perceive at once that the writer of the foregoing has confused phosphorus and arsenic in his non-scientific brain. Possibly he will confuse it with something else some day with more awkward results. We have quoted the above in full, because if such madness is circulated to any extent, it is not unlikely to do serious mischief. A. R. F. seems to consider the water more deadly than the arsenic. In another column *Hoy* tells A. that chlorido of lime is a simple and cheap disinfectant, costing “about 3d. or 4d. a pound.” She adds that chemists sometimes charge more. All we have to say to this is, that the chemist who weighs out a pound of such nasty

stuff for less than 6d. ought to poison himself. To the same querist M. B. recommends Macdougall's powder. M. B. is rather a suspicious looking signature to such a reply. It makes one fear that Messrs. Macdougall Brothers themselves had overcome their natural modesty, and were thus blowing their own trumpet. Then Goldenhair is advised not to use soda-water for washing her hair. Another A. is advised, by one friend, to bathe her eyes with Eau de Cologne and water, while others suggest vinegar and water and “tea of ground ivy.” For Annie's consumptive canary, sponge cake and sherry is prescribed; unless it is a most ungrateful canary we should think it likes consumption. For chilblains, suet boiled in milk is the only remedy suggested. The questions are not so interesting, but the first which catches our eye is such a terrible warning that we venture to quote it. Zcū says, “I want a machine for washing only, as I have an excellent mangle. I employ a washerwoman five days every week (!) and my servants help her to fold and mangle.” Moral: avoid domesticated wives. A Lancashire Witch wants some tooth-powder like that which Mr. Sarel, a chemist, of Brighton, used to make. Mr. Sarel is dead and, witch though she is, this correspondent cannot, therefore, communicate with him. Let her write to us instead.

#### HOW TO WORK A SPECIALITY.

WITHOUT having the pretension to disclose any new systems, the writer will rapidly note a few of the various methods of establishing and developing the sale of proprietary articles which have come under his personal observation during a somewhat extended experience in England, France and America. Patent medicines, perfumeries, toilet preparations, dietetic productions, and other specialities, are now so numerous, and in many instances, are pushed so vigorously and with so much skill, that when it is proposed to launch any new item, or develop the sale of one already partially established, the magnitude of the task appears startling. To attract attention to any preparation, however good and well adapted to the wants of the public, is a task of such an expensive and laborious character, that a brief study of the systems followed by the successful men of the day in this field, may be regarded as a topic of general interest. Whatever may be the scientific opinion in regard to the leading proprietary remedies in vogue, and however much their authors and compounders may lack professional status and a legitimate endorsement of their preparations, it is quite evident that hundreds of these men have succeeded in attracting public notice to themselves personally, as well as acquiring a great celebrity for their articles, by the unusual enterprise, skill, and general business talent displayed in the management of their specialities. It is not difficult to regard such men as likely to achieve success in almost any matter they may undertake, endowed, as they generally are, with the personal characteristics which emphatically command success. Therefore, it is quite correct to suppose that the great fortunes we hear of being accumulated by noted proprietors of specialities, are not exactly happy accidents, but the result of patient and intelligent labours united to a judicious audacity and liberality.

The personal acquaintance of the writer with a number of such men of the three nationalities already named, will enable him to indicate a few of the salient points in their methods of management. While it is quite true that many articles of questionable merit have by mere force of publicity been established in a remunerative sale, it is, without any doubt, essential to the success of preparations in general, that they should possess positive merit, and be well adapted to meet some general public want; otherwise, the efforts made to introduce them will be full of difficulty. The notion, sometimes heard, that advertising will make anything sell, is simple nonsense, as every large advertiser knows. Advertising will undoubtedly create a temporary



demand for almost any article; but unless the article itself responds to an evident public need, and is one which is intrinsically good and likely to make its way on its own merits, as soon as the public attention to it has been gained, it will prove anything but a profitable enterprise to make a serious campaign on such a basis.

At this point, let a word be said on the utter inutility of investments in publicity to develop sales of worthless and trivial articles; and also let it be noted that all successful Patent Medicines, notwithstanding that they are oftentimes popularly denominated nostrums, quack remedies, etc., must, and often do possess intrinsic value, otherwise they could never attain any sale of magnitude or permanency. It is quite true that the enormous aggregate sales of Patent Medicines throughout the globe, a sale which has been extending with tremendous rapidity for the last decade, evidences a great popular want of cheap remedies which may be obtained in the shops, and which, in many instances, renders the expensive services of a medical man quite superfluous.

The profession in France has legitimised patent remedies, and the popular verdict in other countries has been in their favour. In America, where, in consequence of the vastness of the territory, medical aid sometimes cannot be obtained for miles, these popular compounds are oftentimes of great service in maladies lacking gravity.

In proceeding to notice more particularly the business aspects of the topic, it may be remarked that the introduction of a compound of undoubted excellence may be accomplished at a limited outgo by adherence to certain very common-sense methods too often lost sight of by enthusiastic projectors. The style of get-up of an article has oftentimes a considerable influence upon its success. The best illustrations are undoubtedly furnished by the French, who have in the forms of their bottles, style of typography, and wrapper generally excelled the English and American productions.

The retail prices should be in even shillings, francs, or dollars, although a contrary custom prevails in England and France; and where various sizes of bottles are introduced, the prices should be the multiple each of the other, and the larger sizes contain relatively more than the smaller ones. The retail prices should always be printed upon the outside wrapper; the sending-out of bottles of patent remedies without an outer wrapper is objectionable. The directions for use should always, no matter how voluminous they are, be wrapped around the bottle or box, inside of the wrapper; it is decidedly objectionable to have them furnished separately, to be delivered by the retailers.

The American plan of printing the title and other matter on the different sides of the bottle in the four languages most in vogue, as well as full directions in all these languages in the prospectus which is wrapped inside, is an excellent one. In the case of small toilet and remedial articles, the plan pursued in England of getting them up in counter cases is very effective for the purposes of introduction and advertisement, but too expensive to admit of after supplies being furnished in that way. The Americans have given a great deal of attention to putting dozens and half-dozens in pasteboard boxes, with very bold outside labels. These, regularly arranged upon the shelves of a country druggist's shop, form a very cheap and effective advertisement, and also keep in good condition any bottles that may not be exposed for sale in the large plate-glass counter show-cases so much in vogue there. For shipment, these paper boxes are packed generally in wooden cases of one dozen each, and these gross boxes are supplied without charge, the four sides being, when sent out by the proprietor, boldly branded with the title of the article. It is a common thing to notice in American druggists' shops, piles of these wooden cases, many no doubt innocent of contents, but all forming very cheap and effective advertisements. The array of paper-box "dummies" is also something wonderful on the shelves and in the front windows. No box of this kind is ever destroyed as long as there is any vacant space in the shop, its value in catching the eye of the customer being too great. These paper boxes and wooden cases are also well supplied with show bills, and small cards to hang up at odd corners of the shop, and a few dozen circulars for the counter. In some instances, the gross cases contain beautifully got-up illuminated show cards, handsomely framed.

From these details it will be perceived that the Americans

are fully alive to the benefit to be derived by furnishing the retail dealer with a plentiful supply of weapons for publicity in his shop. As the druggists there are much more willing to exhibit show bills and cards than the chemists in Europe, the rage for handsome ones has been carried to a most lavish point. Elaborately hand-painted gilt glass cards, three or four feet square, are quite common in the best shops, being furnished gratis by the leading patent medicine and perfumery makers, at a cost to themselves oftentimes of two or three guineas each.

In deciding upon the retail price of an article about to be introduced, too much attention cannot be given to the discounts which will have to be made to the different classes of buyers in the trade. There should always be a first abatement from the retail rate of one-third for any quantity to one who buys to sell again, and to the same party a further discount of, say, ten per cent. when a whole gross is purchased—this last to be supplemented by an additional discount of ten or fifteen per cent. to the wholesale houses on five or ten gross lots. As the class of goods in question is essentially a monopoly, the proprietor has power to fix his prices as arbitrarily as he chooses; but he will consult his interest by making liberal discounts, selling for nett cash only, and in no case, confidentially or otherwise, giving any advantage to one buyer over another. A printed tariff to wholesale houses should be issued, and rigidly adhered to as to quantities, cash, and days allowed for payment. All changes in this tariff should be notified some considerable time in advance of the period when the change will take place, so as to give wholesale dealers time to arrange advantageously in case of their being either over-stocked or in short supply. These notices should be given simultaneously, that no one may have any advantage from early information of contemplated changes. Having experienced the desirability of this uniformity of dealing with the trade in specialities, the writer is disposed to lay great stress upon it. The proprietor of an article must obviously, in arranging his wholesale and retail prices, allow himself a handsome margin, the expenses for publicity and otherwise, aside from the cost of manufacture, being likely to be so onerous. If, as is often the case, an article is got up by a chemist in the midst of the ordinary routine of his shop, without adding anything for expense of labour, he should not on that account omit to include in his estimate the probable cost of bottling, packing, etc., as in all articles of extended sale a separate organization and force becomes essential. The probable fluctuations in the ingredients of which the preparation is composed, should also be carefully taken into account, as the variation of a price once fixed upon a proprietary article is likely to be damaging. The heavy war tax upon spirits in the United States a few years ago (now reduced) nearly ruined the smaller grade of patent medicine men there, and they were obliged to adopt prices in many cases fifty and one hundred per cent. higher, which resulted in placing their preparations quite out of the reach of persons of moderate means. Coming to the actual work of introducing an article, it is better for persons of moderate means to exploit in the outset large country towns than to attack the great cities. Should abundant means be at command, the metropolis had better be taken in hand first, as the country naturally sympathises in the demand for a preparation which has a metropolitan vogue, even where no local expenditure is made for publicity.

Whatever field is taken up in the outset, it should be thoroughly worked, and the article well made known there before wasting time and scattering efforts in other quarters. No more common mistake is made by sanguine projectors of specialities than in endeavouring to grasp the whole body of the people at once. Any advertisement contracts made should be for cash, or nearly so. It is so easy to get out of one's depth in making contracts payable out of prospective profits. Where an article is already launched and has been favourably received, the extension of its advertisements with a certain amount of boldness is no longer so pure a risk.

The question of newspaper advertising is so broad a one that the limits of this article will hardly suffice for its treatment. Briefly, it must be quite clear that all feeble, cheap, advertising in the obscure columns of the papers has but little effect. The shrewdest advertisers of the day adopt



the most expensive methods, choosing the most costly localities in the principal journals. A few lines at several shillings a line in a prominent part of a newspaper is a better investment than a lengthy advertisement in an obscure column at half the expense. Continuous advertising in every issue of a daily or weekly newspaper, is a great waste of money. If six advertisements on six successive days lead to an expenditure of ten pounds, it would be much more effective to insert one advertisement once a week at an expense of half the money. Small announcements persisted in, if appearing continuously, will undoubtedly, in time, produce a favourable result; but, for immediate sales, resort must be had to bold and sometimes to lengthy announcements. A dignified phraseology should always be adhered to, but any novelty that can be secured in point of typographical display is eminently desirable.

It is very questionable if the paragraph notices of a facetious character, now somewhat in favour with advertisers in the leading dailies, are really effective. The locality chosen is the advantage, if there is one; but, obviously, the notion that the public are supposing they are absorbing the regular reading matter of the newspaper, is presuming too much on their credulity. Of all forms of advertising, none approaches the well-established daily newspaper. Where there are several published in one town, it is better in default of ability to grasp them all, to choose the best one for the article in hand, and go in liberally. *Small advertising does not pay.*

When an article is being introduced, there should always be affixed to all advertisements the name of one or two shops in the town where it is kept on sale. This saves much disappointment on the part of intending buyers, who often apply at a dozen places without success, and ultimately give up their idea of obtaining it. "For sale by all chemists," is a very bad line to add to an advertisement of a new article. Nine out of every ten dealers will say, "We never heard of it before," and the tenth one will offer to procure it; while all (if in America) will suggest that "It's a new thing," "Don't know much about it yet," "We have something of our own of the same kind quite as good." All these influences have to be fought against by the projector of something new, and even at the risk of making some shops jealous, it is much better to name one or two where the article can surely be obtained.

Nothing is so successful as success. Once an article is well established, the chorus is unanimous in its favour from all the shopkeepers; during its struggling infancy, something seems to whisper to them to give it a kick.

Previous to quitting the party "who never heard of it before," it may be well to direct his attention to the eminently modern plan of *advertising to the trade*, now so much in favour with the most intelligent body of advertisers. The last few years have witnessed the establishment of a most excellent series of class and trade journals in several countries—more especially in England—addressing themselves to readers of various professions and kinds of business. To all projectors of new specialities, this class of journals is invaluable, as well as to the proprietors of such established ones as it is desirable to keep alive in the minds of the trade. A great step in advance is made, if the trade can at once be thoroughly informed respecting a new article. In default of ability to inaugurate an extensive range of advertising to the public, a most important impression can be made by bold announcements in suitable class journals; and in conjunction with an elaborate programme of publicity, the columns of this branch of the press offer palpable advantages. These journals, although as yet in a successful infancy, are destined to occupy a greatly enlarged position and influence. The day is rapidly approaching, in fact has arrived, when the intelligent chemist must regularly peruse a periodical specially edited and published for himself and his confreres, in order to keep up with the advances made in the scientific branches of his profession, as well as to be thoroughly posted in its special trade intelligence. Obviously, these are among the earliest channels in which originators of specialities should communicate with the trade, beginning by at once making their articles known, by name at least, to the whole body. There are many other points of detail, which the writer would be glad to include, while endeavouring to consider the topic "How to make a speciality pay," but these must be postponed to a future occasion.

## PHARMACY IN DIFFICULTIES.

(FROM OUR PARISIAN CORRESPONDENT.)

I LEFT Paris with the last batch of foreigners permitted to leave the capital, and am happy to be able to give your readers an idea of what their duties might be, should ever London or any other English city be in such unfortunate case. I presume that the letters I sent you by balloon-post were either stopped by the French authorities on account of any political or strategical information they may have contained, or else fell into the hands of the Philistines, whose *ambulanciers* were, perhaps, anxious to know how their Gallic *confrères* got on under difficulties.

To recapitulate shortly what I wrote from Paris, I will begin by telling you of the voluntary enrolment of all pharmacists as dispensers for the ambulances; medicines to be supplied at wholesale prices based on Dorvault's tariff; personal attendance at the various depôts for sick and wounded being required *seriatim*; the red cross distributed, and all pharmacies declared neutral. I cannot proceed without expressing my highest admiration of the hearty co-operation and unity of feeling existing between the doctors and druggists, who both conjointly emulated in a sincere, pure, and unselfish spirit of patriotism totally free from all pecuniary gain, contrasting so formidably with the petty miserable *mésintelligence* of the two professions in England.

But great events produce great men, and though less impulsive than our neighbours, we could, I hope, find some pharmaceutical souls above half-pence.

On the 21st of September, considerable fighting took place along the whole line south of Paris, extending from Choisy-le-Roi to Villejuif. Our ambulance carts were standing on a road about a quarter of a mile distant from the place where actual fighting was going on, but unfortunately for us, certain disbanded Zouaves pursued by the enemy's cavalry took refuge behind them, and were surrounded. This served as a flimsy and unwarrantable pretext for not only marching us off to Versailles, but also for pretending that we purposely sheltered the French, and we were actually fired at by the Uhlans, who killed one of our horses, and narrowly missed killing one of their own wounded comrades whom the surgeons were attending to. We were released and escorted to the outposts on the third day, having been two days without food, sustaining life only on brandy and the various potable tinctures of our travelling pharmacy. I shall not easily forget the wry face of our Jesuit chaplain after a small glass of tincture of senna. We had only six wounded Prussians that time, who were transferred to the extempore ambulance established in the old historical Palace of Versailles.

Business, as ordinarily understood, was at a complete standstill when I left, although 400 persons per week were dying of small-pox. Extract of meat was in great demand, and was sold at 80 francs per kilogramme (34s. per lb.) People were growing mustard and cress on all their window-sills, the roofs of houses were being covered with a layer of earth to protect them from bombs, and also to serve as salad-gardens—no Parisian's dinner being complete without that admirable anti-scorbutic.

Provided with a Prussian *sauf-conduit*, obtained through the kind intervention of Mr. Washburne, the American minister in Paris—without whose good offices no British subject could have quitted the city—we traversed the German lines, meeting with great kindness and courtesy from all the mayors and all French officials with whom we had to deal, and witnessing unparalleled and unjustifiable cruelty perpetrated with the most systematic brutality towards the poor defenceless inhabitants of this vanquished country by the so-called ultra-civilized descendants of the Goths and Huns. Through all the towns and villages occupied by this calculating, cold-hearted soldiery, I scarcely saw one redeeming trait to their character, everywhere oppression, pillage, destruction, wanton mischief, and conduct to women too execrable to describe. The wine-shops were all sacked by the first invaders, who ruthlessly burst open casks, inundating the cellars with rich old wines, on which floated the livid corpses of the drunken barbarians too besotted to escape their self-inflicted punishment. The druggists in these towns were



earning a comfortable livelihood by selling brandy (*schnapps*) of the most abominable quality. I had hitherto thought my own countrymen were about the strongest drinkers in Christendom, but having seen files of Prussian soldiers swallow each their tumblerful of this undiluted alcohol has so shaken my belief in British capability of inebriety, that I henceforward resign all pretension to its claim on behalf of my fellow-countrymen. We passed on the road many convoys of sick returning to the Fatherland, strings of carts five or six miles long, the wretched occupants covered with a blanket, and lying on straw, were exposed to the bleak cold winds and sleet that were then whistling over the broad plains of the Champagno country. Many died on the road; they seemed mostly very young, beardless boys. As the carts went crushing through the slush, and would occasionally jolt over the dead carcass of some crow-pecked horse, the agonizing, but sad, patient look on their passive Teuton faces, struck us so forcibly that it still haunts me. They had plenty of food, but required care and comfort rather than anything else. In Paris, on the contrary, when the hospitals were crowded with sick and wounded, and where many noble ladies were emulating the good offices of the Sisters of Charity, the happy, cheerful faces of the poor fellows not only showed the effects of good treatment, but the national character was beaming from their eyes in a grateful sort of gaiety so peculiarly their own. Horseflesh, luckily, makes a tolerable soup, but the meat is certainly not adapted for invalids, being black, tough, and indigestible. If kept much over twenty-four hours, it turns green and soon decomposes. Asses' flesh, on the contrary, is red and tender, like beef, but its price precluded a very frequent indulgence in such a luxury. As there was no butter, the druggists were doing a good thing in oils, especially olive, beech-nut, and *arachide*, which latter is always used by the Parisian *gourmet* in preference to olive. This oil, extracted from the ground-nut, is most palatable, and would certainly meet with a great success if introduced to English salad-eaters.

In Strasburg many pharmacies have been burnt during the bombardment—in fact, about one-third of the town has been reduced to heaps of bricks and mortar. Not a house, and scarcely a room that has not had one or more shots through it. Imagine a conical lead-coated steel projectile twice the size of a sugar-loaf, weighing 400 or 500 lbs., crashing through your elegant shop-front with a cork-screw motion that tears a hole a couple of yards in diameter in any wall, and is as likely as not to bring down your house about your ears. Naturally, numbers of poor innocent women and children were killed unwittingly, and the cemeteries and contiguous fields contain hundreds of graves marked only by a rude cross, helmet, or shako. Crossing the Rhine at Kehl—where the Prussians purify all travellers from French contagion by sending them through a long wooden shed stinking of carbolic acid of the worst quality—we came to the demolished railway station, and were not sorry to be once more away from such scenes of destruction, desolation, and death, as we witnessed from Paris to Strasburg.

#### PHARMACY IN THE UNITED STATES.

**D**URING the past autumn Mr. Robert Howden, of London made a tour through the United States, visiting the cities of New York, Boston, Albany, Buffalo, Chicago, Milwaukee, Iowa, Cincinnati, Washington, Richmond, Baltimore, and Philadelphia. At the evening meeting of the Pharmaceutical Society on December 7th, Mr. Howden detailed the result of his observations on the position of pharmacy in the American cities, the following *résumé* presenting the leading points of his address:—

"The Drug Store is generally situated at the corner of a street, or as it is termed in America, the corner of a block. It has externally a handsome and commanding appearance, with large plate glass windows. On looking at the outside from the street, it will be noticed that it is well supplied with blinds,—roller blinds within and shop-blinds without stretching over the pavement,—and that on these blinds are inscribed in large black letters, iced soda water, cool cream soda, Polar soda, Saratoga spring water, congress water, or Ottawa beer. Large boards standing on the pavement under the stall-board plate repeat these announcements. On approach-

ing the window an English chemist searches curiously for large specie jars emblazoned with heraldic designs, or huge show-bottles filled with many gallons of coloured waters. He will look in vain for these, as well as for framed glass tablets relating to pharmaceutical membership and to carefully-dispensed prescriptions. But he will see on the floor of the window, without any inclosure, a few toilet bottles, not always in pairs; large bottles of popular proprietary medicines in faded showy wrappers, with framed show-cards printed in coloured type explaining their merits; some French essences; two or three stray smelling-bottles, supported by many empty eau de Cologne boxes: the whole covered with yellow gauze to keep off the flies. Here it may be observed that the American shop-keeper, or merchant as he prefers to call himself, knows little of the art of displaying goods attractively in his shop window; it is a method of gaining custom altogether unpractised. The display is *within*. It is there the public are desired to see and examine, and this custom is promoted by leaving the shop window bare of goods, and exposing the interior of the store as much as possible to the throng of passengers.

On entering our typical drug store, one is struck at once by its size and its whiteness. It is much larger than chemists' shops at home, often twelve feet high and more than fifty feet deep. The floor is of white marble, the counters of the same material or painted in imitation of it, and the ceilings not whitewashed but delicately coloured in panels. Against the walls behind the counters are the fixtures and shelves that give the character to the store. These begin with drawers like our own, but from them rise at intervals of about four feet from each other handsomely-carved pilasters, their tops united by a continued massive cornice. The walls are thus divided into recesses:—The first and all alternate recesses contain shelves and bottles, those intervening are hung with plate-glass doors making glass cases, wherein are shown proprietary medicines in pint and quart bottles. It is not generally considered of importance that the shop bottles should be very near each other, or that they should be quite filled. In well-conducted pharmacies, boldly-labelled three-pint bottles may often be seen with but half a pint or a pint of tincture in them,—a surprising custom with spirits of wine costing only seven shillings a gallon! In the upper part of these shelved alcoves are occasionally to be seen imposing busts of scientific or classical demi-gods larger than life, who look down with dignified and calm approval on the useful labours below.

The first object that attracts attention upon entering a store is an imposing soda-water apparatus, built of coloured marbles and brilliant with silver taps. The counters beyond, except at the farthest end where a space is reserved for dispensing, are completely covered with deep glass cases, often eighteen inches high. These glass cases contain a profusion of miscellaneous goods, hair-brushes, sponges, Paris perfumery, English toilet soaps, leather purses, union smelling-bottles with gilt caps, cigar cases, wickered bottles, foreign proprietary medicines and specialities of the house.

The arrangements for dispensing are, with a few allowances, similar to our own; as are the graduated measures, pestles and mortars and palette knives. The dispensing scales are of the finest workmanship, very superior to ours, being costly and delicate balances, sometimes with plated silver beams, inclosed in square glass cases having a lifting sash, and forming a conspicuous object at the dispensing counter.

The American pharmacist is at present a self-educated man; he is very intelligent, and extremely well-informed in all matters relating to his profession. His assistants, who are called clerks, have their ranks recruited not by apprentices, a term never used in most of the States, but from the hired boys. A lad of the age of sixteen will enter the service of a pharmacist. He takes with him no premium, but immediately receives wages, and in return sweeps the shop, dusts the bottles, cleans measures, mortars and windows, takes out medicines, cuts labels and serves soda-water. After the second year of "rudiments," he is encouraged to read the United States Dispensatory, corresponding to our Pharmacopœia, and other standard works, is placed behind the retail counter where he learns the art of "serving," and by degrees, from the chief clerk,



the higher art of "dispensing." If the store is within reach of any school of pharmacy, the lad attends the instruction and lectures there delivered at *the cost of his employer*.

This, it is contended, is a preferable method of making pharmacists to the English one of apprenticeships. Over and over again was it said, "I would never have any one in my employ I could not discharge." Incompetent persons are summarily dismissed, the trade relieved from their dead weight, and the capable and intelligent candidates only suffered to remain. These candidates, it must never be forgotten, have previously had the inestimable advantage of a good education provided for them by the State free of all charge to their parents. This system is thoroughly republican; a boy or a man, of never so humble an origin, may advance if he will. The road upward is broad, open and direct; made easy to travel, and maintained by all statute law, by all social law, and by the enthusiastic approbation of every citizen.

No adequate educational instruction is at present available for the young American student in pharmacy. He must teach himself. There are, however, noble exceptions at Philadelphia (of a high order), at New York, Baltimore, Boston, Chicago, St. Louis, and San Francisco, where lectures are delivered during the winter evenings on materia medica, chemistry, and practical pharmacy, examinations held and diplomas conferred. In every instance, except the city of Baltimore, the attendance is entirely voluntary. There are no classes for teaching Latin, a knowledge of that language being considered unnecessary, as physicians now write their "directions" in English.

Of trade customs, the most important is that the whole of the medicines prescribed by the medical profession are supplied entirely by the pharmacists. No physician, the generic term for the whole body of medical practitioners, sends out his own medicines. He invariably writes prescriptions. On the other hand, no pharmacist prescribes. He carefully and scrupulously abstains from doing so. And this is the universal and national custom in all the States, with few and rare exceptions on the part of depraved members in either profession. The effect on the welfare of pharmacy is manifest; a very large number of stores, even in country towns, dispense thirty prescriptions in a day; and in the cities some thirty, others fifty, a hundred, and even a hundred and fifty. The physician is very jealous of his prerogative, and will occasionally endeavour to prevent a pharmacist repeating a prescription unless a second fee has been received by him. That a copy should be given for the use of the patient's friends, he regards as an outrage. No prescriptions are returned to the patient, but are preserved pasted in a book, by the chemist who first dispenses them. The physician's fee is generally twenty shillings for a first consultation and eight shillings for every subsequent one; lower fees are taken from the less affluent classes. The pharmacist generally charges about sixpence an ounce for medicines, that is, three shillings for a six-ounce mixture.

The next important custom is that pharmacy is a free trade all over the United States for any one who chooses to enter its ranks. Any person may open a drug store anywhere, and boldly write over it pharmacist or apothecary. Although this state of things is greatly deplored by every respectable pharmacist, at present it is the law, with the exception of the city of Baltimore, and in a modified degree in one or two States; the only condition required by the Government being one it never suffers to be neglected—that of taking out a licence. This is done at an annual charge of two pounds. It tobacco is sold, another licence is required, at a cost of one pound; and if spirits of wine and intoxicating beverages are dealt in, a further licence is necessary, at the cost of five pounds. All pharmacists take out an apothecary's and a spirit licence, and many a tobacco licence, thus paying to the State annually eight pounds.

Throughout the United States, everything is of a high money value—according to the common phrase, "doubled since the war." The rents paid by pharmacists form no exception to this law. In a rising country town, £100 a year is a moderate rental; in the inferior and third-rate streets in the cities, about the same. In the second best streets, £200 and £300 are paid in very numerous instances. In the leading thoroughfares of the chief cities, as New York, Boston, and Chicago, the rents are commonly £500, and in

the very best situations £750, £1,000, and even more, per annum. For these enormous rentals the landlord only lets the shops with the basement, and is most unwilling to grant a lease. The rents paid by public companies, firms, and particularly by drapers, are greatly in advance of these sums.

When "everything is dear," it follows that wages and salaries must be high. A boy on first entering a drug store receives about eight shillings a week, advancing as he improves to twelve and sixteen. On becoming a clerk, he receives at first £60, then £80, then £100 a year. When chief clerk, £140 to £200, and in rare cases £250. In every case, he has to provide his own board and lodging; for no pharmacist lives at his place of business, or supplies meals to those in his service.

The hours of business are very long all over the Union, generally from 7 a.m. to 11 p.m. There are some cities where they are from 6 a.m. to midnight, every pharmacist in these cities, without exception, observing them. An inscription over one drug store announced, "This pharmacy open night and day." All chemists' shops are open all day on Sunday everywhere. Very few shutters are used; the inside roller blind is drawn down to shut a store, and drawn up to open it. Gas is subjected to a tax by Government, and is, therefore, exceptionally dear, costing in different cities from nine shillings to fourteen shillings per thousand feet.

With heavy charges to defray, the returns of a pharmacist's business are necessarily large. During the summer months, heavy sums are taken for iced soda-water, and other gaseous beverages. In the West, in one moderately-sized city, several pharmacists will take each £8 a day for draughts of soda-water and fruit beverages, of which £5 will be taken in the evening. In the cities, this sum is exceeded. There is one apparatus in the very best situation in Boston that is well-known to return £40 a day during hot water.

The general results of pharmaceutical trading are very high; £2,000 a year is a moderate annual return. Many stores return £6,000 per annum, and in every large city there is at least one, if not two, pharmacists whose returns are £12,000 a year.

The art of skilfully preparing medicines, whereby they become less nauseous in taste, more easily digestible, or more permanent and convenient in form, is largely practised under the name of "elegant pharmacy." Combinations attaining any of these results are in much request, and are welcomed eagerly by the physicians, who continually order them in their prescriptions. A large increase of business accrues to the ingenious pharmacist, not only from his own city and State, but from the whole Union. Orders for these preparations are entered one after another in an order book, from places as remote from the pharmacist's city as St. Petersburg and Madrid, Vienna and Paris, Rome and Christiania are remote from London.

In conclusion, Mr. Howden expressed his admiration of and gratitude for the cordial and generous welcome extended to him in every city by every pharmacist to whom he applied. There was invariably an earnest desire to supply abundantly every kind of information that might be thought interesting to the Society in London. He found among the large body of pharmacists in the United States many individuals eminent for varied experience, practical skill, and ripened intelligence, whose matured powers, at present confined to the routine of their own stores, might, under kindly and more public circumstances, nobly contribute to the service and progress of the profession of pharmacy.

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THE "Chemists' and Druggists' Almanack and Diary" evidently improves with age, both internally and externally. Beside a neatly got up diary, suitable for the counting-house as well as for the retail chemist and druggist, the following, amongst other valuable articles, will be found in its pages:—"Pharmaceutical Chemistry, 1870," by Professor Atfield; "The Gravimetric Tests of the British Pharmacopœia," by W. A. Tilden, B.Sc.; a most able paper on the "Chemical Tests for Medicinal Articles," by Sidney W. Rich; a list of Scientific Societies, with other matter specially interesting to the class for which it is designed, and to whom the Almanack and Diary has already become indispensable.—*Burgoyne's Trade Report*.



## Veterinary Notes.

BY W. HUNTING, M.R.C.V.S.

### CORNS.

THE seat of this injury to the horse's foot is at the angle of the sole, between the outer wall and frog. Corns in the horse have no analogy to the same named annoyance in man. They are bruises of the sensitive structures within the hoof, the result of uneven pressure of the shoe. The discoloured horn is merely a symptom, the same as we see in our own nail, as the result of injury.

Corns are invariably due to the shoeing, and can certainly be prevented, and generally got rid of by merely performing that operation in a proper manner. For all this, we often meet horses with corns of some months' standing.

A bruise may be so severe or so long-continued as to cause the formation of matter. We have then what is called a "suppurating corn." This event seldom occurs if attention be directed to the spot in the first instance; should it, however, be present, we are justified in cutting away the super-imposed horn, so as to allow the escape of the pus. This done, and the wound in a healthy state, a little pledget of tow, dipped in tar, is placed over it, and the shoe is re-adjusted, care being taken to place no pressure on the portion of wall adjoining the injury.

The commoner and simpler cases merely present discoloration of horn, pain on pressure, and lameness, the heels being generally raised from the ground when the animal is standing. The usual plan of treatment is to cut away the blood-stained horn down to the sensitive parts, *to see if there is any matter*. Such an exploration is unjustifiable, and unworthy of any man professing ability to diagnose and treat disease. Remembering that we merely have a state of congestion in the part, that the integrity of the horny covering is essential to the proper function of the part, and that the horn thus removed cannot be reproduced for at least six weeks, it is but too evident that such treatment is far more mischievous than the original disease. The simple plan is to remove the shoe, foment the foot for three or four hours, and then carefully replace a shoe, taking a level bearing throughout. If possible, a day or two's rest is expedient; but in too many cases the animal is wanted for immediate work, when we are obliged for a time to guard against any pressure on the injured part, by slightly lowering the wall.

I know no greater cause of corns than short shoes, or, what amounts to the same, a shoe "eased at the heels," *i.e.*, fitted so as to leave between it and the extremity of the heel a space without bearing. The effect of this is to leave the extremity of the bearing surface of the shoe just over the seat of corn where it is extremely apt to produce uneven pressure.

### SEEDY TOE

is a condition of the horse's foot in which we find a separation of the wall and sole, a separation sometimes extending up between the wall and the structures attaching it to the coffin bone. The space cannot be seen without removing the shoe, but can usually be detected by tapping the hoof with some hard substance, when a distinctly hollow sound is emitted.

This condition arises from some injury which has checked the formation of horn, or so modified its secretion as to allow of its breaking up. The term "seedy" expresses very well the state of the affected horn. The affected part being weakened is not capable of offering much resistance to deranging forces, so that the shoe, unless carefully applied, may produce lameness.

Continued irritation to the part causes excessive growth of horn—in other words, a horn tumour—and this by pressure produces absorption of the coffin bone, an irremediable injury. The only radical cure for a "seedy toe" is to remove every portion of detached horn, artificially protect the foot, and by stimulating the coronet, promote its reproduction. About three months is required for this. A horse may be kept tolerably sound and at work by good shoeing; but if a valuable animal, I always recommend the radical course.

### SAND-CRACK.

I apply this term to all fissures in the wall, extending from the coronet downwards. The fissure, at first very small, runs in the direction of the fibres, and never reunites. Our object, then, must be to prevent it from opening wider, and to remove its cause, so as to allow the newly-formed horn to grow sound.

The time required to get rid of a sand-crack is that requisite for the reproduction of the entire wall—about nine months. A favourable termination may be postponed by anything which shall allow the new horn to crack or the old opening to irritate the tissues beneath.

Lameness caused by sand-crack is usually treated by cutting away the horn on each side. This is only an aggravation, unless there is some pent-up matter requiring an outlet.

Should I meet with a sand-crack already "cut out," I first fill up the groove with some compound, and then proceed, as with any other, to bind it up. This is done after the shoe is on, in the same way as a cricket-bat handle is "lapt." I use waxed string not thicker than a crow-quill. Like all other diseases of the feet, good shoeing is indispensable to a cure, or even palliation of sand-crack.

### COMPOSITION FOR REPAIRING HORSES' HOOFS.

This substance may be used in cases of "seedy toe" or "sand-crack," and when the free edge of the foot is broken by travelling without a shoe. I have used it with great success. The ingredients are gutta-percha and gum ammoniacum; two parts of the former to one of the latter. The gum is placed in an iron pot or ladle, over a slow fire, and the gutta-percha, previously softened in hot water, is cut into small pieces, and added. The whole must then be stirred till homogeneous. It is as tough as gutta-percha, somewhat harder, and a great deal more tenacious. It may be used as soon as made, or kept in rolls, and melted when wanted on to the spot with a wax taper. A few finishing touches with a hot knife will leave it smooth and level, and not recognisable from the hoof.

### DRUGGISTS' CHARGES.

WE have noticed with much regret during the past few months that with persistent bitterness the *Lancet* has directed a series of the most uncalled-for insults against chemists and druggists as a body. We have regretted this, not on account of the chemists and druggists, but more especially for the sake of our contemporary itself, and still more out of regard to the true gentlemen of the profession, who are to be found—as numbers of our readers will gladly testify—and who work cordially and heartily with us, avoiding the coarse abuse to which we have just alluded, on the one hand, and the equally vulgar supercilious condescension on the other, which until recently was the tone of some part of the medical press whenever it thought fit to refer to druggists. It is not with any desire to combat the arguments of the *Lancet*—or, we should rather say, the dummies which do duty for arguments—that we allude to the articles which have appeared on this subject in its columns. We speak the views of many of our best men when we say that the vituperation indulged in by this paper at our expense is not worthy of a reply. Its object has been so manifest, and its ground so false, that we should only strengthen the one and advance the other if we attempted to refute the assertions brought forward against us. We have often had occasion to quote or to remark upon the value of articles which have been contributed to the *Lancet*, and in the interests of medical science we hope the conductors of that journal will put an end to the apparently reckless endeavour to make it the organ of the rowdies of the profession. If its editor chooses to let his journal slip from the position which it has attained, there are plenty of clever competitors who will not fail to make the best of the opportunity thus offered them of representing the respectable portion of the profession. The animus against the trade of which we accuse the *Lancet* was recently very decidedly exhibited by the manner of the insertion of a letter, written by "A Prescriber," narrating an apparent case of extortion on the part of a chemist. We quote the



letter below. The writer gives no name nor address—neither his own nor that of the druggist. He tells us nothing about the medicine, which may therefore fairly be presumed to have been an ordinary mixture. We say it is an *apparent* case of extortion, because we know that even “Prescribers” are liable to make mistakes sometimes, and unless we had the fullest particulars of this case before us, we should hesitate to pass a judgment. The following is the story:—

“In the beginning of last July a young lady, who had come to London from a long distance to be under my care, surprised me by remarking that she was very sorry, but she could not afford to take any more of my medicine. This led to several questions and answers, the upshot of which was that it appeared the druggist charged her 4s. for every 6 ounces of mixture. Thinking she must have made a mistake, I asked her to bring me the druggist’s bill, which she said she had at home. Within two hours the bill was in my possession, and there, sure enough, 36 ounces of mixture were charged £1 4s. Still thinking there was a mistake, but this time on the side of the druggist, instead of that of the patient, I sent for him. He came, and assured me that there was no mistake on his part, 4s. being his and ‘other people’s’ usual charge for the mixture. Doubting this assertion in as far as it related to ‘other people,’ I put on my hat, and walked straight to the nearest druggist’s shop, and presented the young lady’s prescription. The charge here made was 1s. 6d., being at the rate of 9s. per 36 ounces, instead of £1 4s. Now, Sir, what was the cause of this striking disparity in price? Were the ingredients used in compounding the mixtures different at the two shops? For the sake of humanity and the good fame of pharmacy, it is to be hoped not. Was it on account of a difference in the quality of the bottles and paper in which the mixture was dispensed? Surely not. Was it on account of the rent of the one shop being 266 per cent. greater than the other? In a word, was the patient paying for ‘locality and style?’ That I can myself answer in the negative; for the £1 4s. establishment is a small shop in a side street, which I fancy the young lady selected on grounds of economy, she being the daughter of a country clergyman, whose blessing in this world consists rather in a superfluity of olive branches than of loaves and fishes. I shall say no more than that the 1s. 6d. charge was made at a first-class establishment in one of the best streets in London. Let reflecting minds reflect and answer for themselves the question—Is it the doctor or the druggist who drives the respectable class to seek gratuitous advice?”

No doubt it was quite a right thing to be angry about such a heavy overcharge as this, and the publication of the case was perfectly justifiable. But is it possible to reconcile with the laws of ethics the attachment of a title to this narrative which boldly indicated that it was not by any means an unusual practice among chemists and druggists. The daily press took up the dainty little paragraph, and for a day or two “Druggists’ Charges” caught the eyes of a great part of the reading public. With what result? Why just this. An impression in the public mind that henceforth druggists might be classed with lawyers and horse-dealers, and should be watched with suspicion. “Beware of your pockets!” was visible to the scared readers among the coloured show-bottles. Nervous invalids had scarcely recovered from the shock which the sensation paragraph-mongers had hut recently inflicted on them by their fancy sketches of the dispenser bewildered among his strychnine and laudanum-bottles, and the patient going home to take his dose and die, when down comes sensation paragraph-monger on him again. Lawyers and horse-dealers did we say! Why, brigands give you a choice, but druggists have resolved to have both your money and your life!

Very clever on the part of the *Lancet* to convey this impression by the skilful use of two words, was it not? Very clever; but not very just, not very truthful, and, we add *therefore*, not very wise. The staff of the *Lancet* is quite sufficiently versed in the ordinary rates of dispensing prices to know that such a disparity of charge is so unusual that in all probability it would not be met with again through the length and breadth of the kingdom, and the paragraph should have been inserted as an extraordinary occurrence, and classed among the “enormous gooseberries,” or “sin-

gular freaks of nature.” We do not ask to be treated with exceptional tenderness, nor do we look for reparation for injuries already conferred; all we venture to ask is, that in future our smart contemporaries will fight fairly, and limit their liveliness at the boundaries of literary honesty.

#### MERCURIAL SALIVATION.

BY DR. JOSEPH R. WOODLEY.\*

**M**ERCURIAL salivation and its sequæ are peculiar among the many diseases against which the dentist has to contend. This affection has several synonyms, among the most common and characteristic of which is ptyalism. Generally it is, therapeutically or pathologically speaking, a condition resulting from the constitutional effect of certain remedies administered with a view of lessening the plasticity of the blood in diseases of asthenic form, characterized by great plasticity of that fluid.

There are several articles in the *Materia Medica*, whose action in the human system is manifested on the gums and mucous membrane of the mouth and throat. These agents belong both to the vegetable and the mineral kingdoms. Many of them, especially those of the former, excite simply increased action of the salivary glands, while others of an inorganic nature, show their effect on the glandular organs of the mouth and pharynx only through the system at large; such as the preparations of mercury, iodine, gold, &c.

But first of all let us define the condition termed salivation:—It is an excessive flow of saliva from the glands of the mouth and adjoining parts, whose office it is to secrete this fluid for useful purposes in the first process of digestion. In ordinarily mild cases of salivation, this flow of saliva is accompanied by an irritation and slight pain in the glands, generally ceasing after a few hours, at the farthest in a few days, after the discontinuance of the exciting cause.

But it is of *mercurial salivation*, and its effects on the mouth and teeth, that we shall treat at present. We find that after the administration of any of the preparations of mercury to an extent varying in different individuals, an increase of salivary fluid occurs, with more or less tenderness about the gums, and fetid breath; a grayish blue line is often seen along the alveolar ridge embracing the teeth, with a metallic taste in the mouth which continues for days. This taste is “copperish.” If the administration of the mercury is kept up, or has been already “pushed” to a considerable extent, the teeth lose their firmness—the gums become much inflamed, bleeding at the slightest touch, and losing their adhesion around the necks of the teeth, and to the alveolar ridge. Often there is excessive inflammation with increased heat along the line of the jaw, and of the mucous membrane lining the entire mouth and throat, and great dryness and huskiness in speaking. The patient experiences much pain in bringing the teeth together quickly with any degree of force. If this condition continues without amelioration of the symptoms, it is found that the mucous membrane presents disintegrated patches of greater or less size along its surface, even to such a depth as to destroy the epithelium, and form ulcers varying in extent. The throat assumes a grayish glossy appearance, and the tongue participates to a considerable degree. These ulcerations may extend on the surface or may deepen, in the latter case usually resulting in abscesses, which may eventually leave fistulous openings along the jaw and through the gums. Where such is the case, the patient becomes a great and pitiable sufferer, and much time may elapse before he can use his lips or teeth for purposes of speech and mastication. Any of the preparations of mercury may give rise to this variety of salivation. These preparations vary much in their power of producing this effect, in the period of causing it, and the extent to which this morbid action is manifested. But of all the forms of mercury, calomel or mild chloride is the most potent. The protoxide is also a powerful agent in this particular; especially so the deutiodide, while the bichloride may be administered to a considerable extent without giving rise to such accidents. If the bichloride is given in combination with the muriate of ammonia, it is much less liable to produce ptyalism. The same protection is noticed when the patient takes the

\* Contributed to the *American Journal of Dental Science*.



chlorate of potash, either at the same time or after the use of mercurials. Many cases of salivation are caused by the external application of mercurial ointment, which is often used in dressing blisters, in extreme cases where it is desirable to obtain the rapid action of the remedy, and from application in the flexures of the body for the same purpose. It was formerly common to prepare a belt of kid or buck-skin, or even of several layers of silk containing more or less of this ointment, to be worn around the waist of children affected with secondary syphilis from their parents. The citrine ointment and red precipitate of mercury, are often used for dressing indolent ulcers in children and even in adult patients. All these mercurial ointments are capable of giving rise to "mercurial salivation." It is particularly worthy of remark, (in all my observations in "mercurial salivation,") that children are less susceptible than adults to the action of mercury on their gums, the principal reason being, probably, because the elimination is more active in the young, and that the agents refuse to pass from the system without expending their full potency therein. It is well known that the constitutional action of mercury is much facilitated by combining it with some preparation of opium for internal administration, and it is important that great care be exercised in watching its action. When passed off quickly by the bowels, there is far less risk of salivation, than when its action is guarded by opiates. This opiate combination is often necessary where it is desirable to prevent mercurial diarrhœa, which is often obstinate and debilitating; sometimes in a patient with a rich fibrinous blood it is necessary to deteriorate it as quickly as possible. Such a course of administration is generally seen where much active inflammation is present, and where it is requisite to prevent a deposit of pseudo-membrane, as in acute laryngitis or croup. The most expeditious mode of getting the prompt action of mercury on the system, is to introduce one scruple (20 grs.) of the mercurial ointment into the rectum, two or three times in twenty-four hours. This plan results, generally, in salivation in twenty-four or thirty-six hours, but while this mode of procedure is certain and speedy, it is none the less dangerous to the patient, for we quickly see supervening distressing signs of profuse salivation, often of long continuance and of great severity. When we have a case to deal with, where a patient has been salivated, we find the teeth and all parts of the mouth suffering from its effects in the manner we have before described. The patient tells you that he was salivated months or years ago, and since then the teeth have been more or less loose, the breath fetid, and an unpleasant taste always present in the mouth. It is always the duty of the dentist who has due regard for the patient's welfare, as well as his own reputation, to relieve this diseased condition of the mouth, rather than to remove the teeth, (which is too often done,) before having made use of every expedient in his power to preserve them. It is rarely the case that the dentist sees such patients soon after ptyalism has been produced; generally it is months and years before the sufferer presents himself for professional treatment. I shall not burden my readers by a long detail of how ptyalism in its mild and severe forms ought to be treated, for every dentist of long practice, with many such cases, has his own theory and practice. But for the sake of the young practitioners, it may not be amiss to make a few remarks upon its treatment, as the dark prospect of many cases need all the light that knowledge and judgment can shed to illuminate a pathway towards relief; and if I can afford any upon the subject I shall be amply repaid for my endeavours. Where the case is recent, the best mode is to give the patient tonic treatment, to keep the bowels open with small doses of Epsom salts, to avoid salt food, and to partake freely of such succulent vegetables as best agree with him, in order to relieve the scorbutic tendency of the system, to abstain from the further use of mercurials, and to use such washes for the mouth as have been found most beneficial in the condition referred to. Frequent washing of the mouth with cold water or cold infusion of some vegetable astringent often affords relief, if the patient will persevere with them, though it is generally best to prescribe some astringent or correctivo wash, lest the patient become dissatisfied with the delay and apparent indifference of his dentist. One among the better applications, is a solution of

one and a half drachms each of chlorate of potash and alum, in five ounces of water, with the addition of five ounces of strained honey. The chlorate of potash exercises a beneficial effect in all cases of inflammation of the mouth, especially where there is an ulcerous condition of the mucous membrane. Such is also the case where apthæ is present in children or adults. The chlorate of soda is just as good, having even the advantage of being a little more soluble than potash. Alum has a good astringent effect. Where much fetor is present, it is well to add one drachm of hyposulphite of soda to the wash; flavouring may be added to suit the taste of the patient or the fancy of the dentist; even the addition of a small quantity of creosote or carbolic acid, say ten drops, to the potassa mixture, will often have the good effect of gently stimulating the parts to heal, besides being a fine disinfectant. Tincture of myrrh is often used with good effect, giving it the proper dilution, and adding a small quantity of the chlorate of potassa, a little creosote, and hyposulphate of soda to the preparation. Any astringent mouth wash will answer, even brandy has a good effect, being an astringent and gently stimulating. Should the diseased condition of the gums continue in spite of every effort to bring the parts to their natural state, we may resort not only to the above remedies, but to the free use of the lancet in scarifying the gums. If the disease is allowed to progress, peridontitis takes place, which ends in sudden or gradual destruction of the membrane that gives life and vitality to the teeth, suppuration often commences, and we soon see severe abscesses forming around the alveolar ridge and necks of the teeth, with sometimes immediate loss of these organs; in other instances they drop out months or years afterwards, although perfectly sound, because of the absorption of the gums and the alveolar surroundings. The patient frequently suffers severe pain and becomes clamorous for relief by extraction, as an escape from his constant suffering, and the dentist now, has no alternative but to extract such teeth as he can clearly see are most affected.

Great discretion should be exercised in the use of the forceps, lest, in after hours, both he and his patient should see the error of too hasty extraction of these useful organs, when the dentist receives the censure of both his patient and unscrupulous members of the profession.

I fear I am carrying my subject too far, but, as I have before remarked, to the young practitioner it may be of some value. We may rejoice to know that our profession is making such rapid advancement in the knowledge of preserving these important organs of mastication, upon which the health and often the lives of our race depend, and that it is attracting the attention of all eminent practitioners of medicine. Many a dentist can enumerate cases where he has been called upon to treat, which some of the most eminent physicians have for months vainly endeavoured to cure, and at last find that the skilful treatment at his hands restored the anxious and suffering patient to health. It would be well for the patient, if every physician, when prescribing iron and other medicines compounded with acids, &c., so destructive to the teeth, would advise the use of liquor calcis, (lime and water,) or calcis carbonas precipitate; these being alkalies, neutralize the acids, thus saving the teeth from their corrosive influences. Then, the physician would not hear that oft-repeated reproach, "Oh! Doctor, the medicine you gave me has made my teeth so sensitive, and has put them on edge." I have spoken of the importance of preserving the teeth from the ravages of abusive medications, and space will not permit me to say more concerning the deleterious effects of disease of these organs upon the system. I will hope that this essay at "penning" in an interim of preserving, plugging and pulling, may offer practical suggestions to those of less experience than the writer; that it may serve to arouse from their lethargy abler pens than mine; that it may contribute to impress on us, one and all, the importance of preserving the teeth, and of counselling those who should be our auxiliaries—every physician, and every father, mother, and child.

THE PUBLISHER OF THE CHEMIST AND DRUGGIST has in stock some handsome reading cases to hold six numbers of this publication. Those will be found very convenient by those who care to keep their papers in order. Price 2s. 6d. each, sent for enclosure to any London wholesale houses. 2s. 9d. post free.—[ADVT.]



## Pharmaceutical Society of Great Britain.

## PHARMACEUTICAL MEETING.\*

Wednesday, December 7th.

MR. HASELDEN, VICE-PRESIDENT, IN THE CHAIR.

AFTER the formal business was concluded, Dr. Attfield drew attention to an improved form of an apparatus invented by Mr. Baden Bengler, the object of which was to secure, automatically, an equability of temperature when gas is used.

Mr. Bengler's apparatus originally consisted of a tube in the shape of the letter U, introduced between the gas-burner and the source of supply. Into one limb of the U tube was inserted the gas-pipe, at the bottom of which was a narrow slit through which the gas passed, and thence by a second pipe out of the same limb of the U tube, on its way to the burner. The bottom of the slit and the bend of the U tube was closed by mercury. The other end of the U tube is connected with any chamber that is being heated; a rise of temperature expands the air in the chamber, which immediately presses on the mercury in one side of the U tube, raises it at the other end, partially closes the slit, and thus diminishes the supply of gas to the burner. Conversely, when the chamber begins to cool, the air contracts, the mercury rises in the free limb of the U tube, falls in the other, and allows a greater supply of gas to go through the slit. It was found, however, that when this apparatus was connected with an oven such as was exhibited (about 1 foot square), having a jacket within, it was rather cumbrous and expensive; and Mr. Bengler therefore proposed, as a modification, that an air-chamber of any size desired should be lowered into an unjacketed oven, or whatever apparatus was being heated. In the connecting-pipe was a small stopcock, which, being left open until the requisite temperature was attained, would then be closed, and the apparatus at once become self-acting. Another modification was to use a glass flask, or even a test-tube, which might be connected in the same way with the U tube, and lowered into any solution which it might be necessary to evaporate at a lower temperature than boiling-point, or any other fixed temperature.

The CHAIRMAN drew attention to the collections of prescriptions which had been laid on the table by Mr. Ince.

Mr. INCE said the collections which he and his friends were forming were intended to illustrate every subject connected with pharmacy; and each of the fourteen volumes on the table contained about twenty American prescriptions, taken from the different States, and illustrating the exact style of prescription which were in use in the United States. Some were written in ink, and others, as was quite as common, in pencil. These latter had been carefully preserved, to avoid the risk of their fading; so that he hoped they would, to some extent, illustrate the general subject of American pharmacy.

Mr. ABRAHAM asked if the volumes on the table contained any of Mr. Watson Bradshaw's prescriptions.

The CHAIRMAN said he thought the specimens which had appeared in the journal were quite sufficient.

Mr. INCE said there were four specimens of Mr. Bradshaw's prescriptions on the table.

Mr. BROWN, of Manchester (in the absence of Professor Bentley), exhibited a collection of dried pharmaceutical plants arranged by Mr. Siebold, of Manchester. Mr. Brown explained that Mr. Siebold had taken great pains, and had gone to considerable expense to provide a collection as complete as possible, obtaining from the Continent those which could not be procured in this country. He had now prepared 150 sets of such specimens, each set comprising about 100 plants. These were mounted very carefully, and appeared to him (Mr. Brown) to form an invaluable aid to pharmaceutical students. Mr. Siebold intended to offer them for sale at four guineas each set.

Mr. HOWDEN then delivered the address of the evening, on the "Condition of Pharmacy in the United States." We print a *résumé* of this address on another page. At the

conclusion of the address, the President and Dr. Attfield made some remarks on the subject. The hour for separating having arrived, it was understood that if members wished to continue the discussion, an opportunity would be offered at the next meeting on the 4th of January.

A vote of thanks was unanimously passed to Mr. Howden for his exceedingly interesting lecture.

## Dentistry.

LAW WANTED.

AT the meeting of the Odontological Society, on November 7th, Mr. Charles James Fox, M.R.C.S., L.D.S., read a paper on "The Position of Dental Surgery as a Profession," in which he strongly advocated a scheme providing for the registration of all dentists now in practice, and the examination of all who should enter the profession after a certain date. The terms proposed by Mr. Fox were very liberal towards all persons engaged in dentistry, but his aim is eventually to confine all dental practice to those who shall attain the degree of L.D.S. In theory we cannot but agree with this. Exactly the same arguments, which induced us to advocate the Pharmacy Act, are applicable to this case, so long as we look at it without regard to actual circumstances. But unless our impressions are very wrong—and Mr. Fox gives us no exact statistics to enable us to judge more accurately—we believe such an enactment would be utterly impracticable in a great part of Great Britain. Everyone knows large districts of the country, including scores and hundreds of small towns, which have not among them one resident professional dentist; simply for the reason that it would never pay a man to go through the curriculum and establish himself in a little place where the charms of artificial society had not penetrated sufficiently to make his practice profitable. In these places, with scarcely an exception, the chemists do all the dental work, and, as a rule, they do it very well too. Until, therefore, it can be shown that it will be worth the while of Licentiates of the Dental Society to spread themselves about much more generally than they do at present, we cannot think the time has come for advocating such a limitation of the right to do dental work as is now proposed in the interests of the public. Unless the public good can be shown to be clearly benefited, Parliament is not all likely to be favourably influenced towards monopoly, and speaking from our own experience, we should unhesitatingly say, that the public would be so far injured by such a change, that in a very short time it would become a dead letter.

## HEMORRHAGE.

During the last twelve years we had a goodly number of patients of hæmorrhagic diathesis; and, in every case except one, controlled the bleeding with small pellets of cotton, held in the tweezers, dipped in creosote, thrust into the bottom of the cavity so as to come into contact with the bleeding artery. The creosote albuminizes the blood, making an insoluble plug over the bleeding place.

To prevent the lifting of this plug by the force of the discharge of blood, it is well to force in, on top of the cotton and creosote, a few pellets of fine sponge, rolled tightly between the thumb and fingers. The exception was one in whom, after checking in the usual way, the blood commenced oozing out of the gums, around the cavity. Took a wax impression, ran a plaster model, and made on this a heavy gutta-percha compress, attaching it with clasps to the adjoining teeth. This had the desired effect.—JOHN D. WINGATE, D.D.S., in *Dental Cosmos*.

THE amount of useful pharmaceutical and condensed information introduced into the "Chemists' and Druggists' Almanack for 1871" is truly astonishing, and speak much for the editor's acumen and judgment as to the wants of the trade. We consider it the best Almanack ever issued from Colonial-buildings, and when it is remembered how excellent the two last have been, we think no greater stimulant can be given to induce every chemist to secure a copy at once.—*William Mather's Price Current*.

\* We are indebted to the *Pharmaceutical Journal* for the greater part of this report.



## Homœopathy.

THE following is a report of the address of the President (Mr. Ross), at the first meeting of the Homœopathic Pharmaceutical Society this year. We extract it from the *Monthly Homœopathic Review* :—

"Gentlemen,—The time has again arrived when we assemble within these walls to resume our duties as members of the Homœopathic Pharmaceutical Society of Great Britain; and at this our first meeting for the session of 1870-71, it will not be amiss to recal to our minds the objects for which we meet, and what it was which prompted the formation of this Society.

"It was, you will remember, a common danger which first brought the homœopathic chemists together; and it is at such times that men forget party feeling, social distinctions, jealousies, and creeds—then it is that whatever is good in men comes to the surface—then it is that true heroism is displayed, and that which is noble, manly, generous, and self-sacrificing is manifested. In proof of this, witness the Franco-German war now being waged on the Continent. The declaration of war by France brought about, in a few days, what would have taken the astute Bismarck as many years to accomplish, viz., a united Germany. What appeared to us a declaration of war on the part of the Pharmaceutical Society, made us forget our prejudices and jealousies, and we were willing to co-operate for our mutual protection, and for the obtaining of our rights as tradesmen and homœopathic chemists. This was as it ought to be; and but for this episode in our history, many of us might have lived and died without knowing each other, except by name. The time of danger made us feel rightly towards each other; and as a result of this right-mindedness, that time was considered a befitting opportunity for forming ourselves into a society for mutual improvement and the development of homœopathic chemistry. But the danger is past—the cloud which at the time appeared so threatening, so inimical to our interests, was explained away by the Privy Council; and happily, there is now but the latter motive for co-operation remaining, viz., our mutual improvement and the advancement of homœopathic chemistry. The question then is, is there in this a sufficient incentive to prompt us to work for an object so important, for an end so desirable? If we appeal to the past, what is the verdict? Alas! we fear that the interest with some of us is not so real, so earnest as it ought to be. Two sessions have past, and the interest evinced by many of our members has begun, continued, and ended in the mere paying of their subscriptions. Gentlemen, this is not enough. We meet to-night to inaugurate a third session, and what is our programme? Every member has been solicited to take an interest in the Society; your Committee have done their best to prompt you to take up some subject for a paper; and out of nearly fifty members, but one has replied, and that one does so only to excuse himself from taking an active part in the working of the Society. We know it to be a lamentable fact, that in all societies the work is done by a few persons; but that is no reason why that should be the case in this: we would have the Homœopathic Pharmaceutical Society of Great Britain an exception to the general rule. We must look the facts in the face; the Society stands or falls by our taking a right view of things. Mutual improvement means mutual work. If we are to become men of science, we must acquaint ourselves with the sciences; if we are to benefit each other, we must be industrious students. 'Knowledge will not be acquired without pains and application; it is troublesome and deep digging for pure waters; but when once you come to the spring, they rise up and meet you.' The age of miracles has passed by, and our large faith in our little doings will not remove mountains. It is best to be frank with ourselves. As homœopathic chemists, we are very much behind our brethren of the old school in scientific knowledge; and until we are convinced of this, we shall not be roused to the exertions required for the amendment of this state of things. The air we breathe, the water we drink, the earth on which we tread, the plants which grow, the food we eat, might all be made subjects of surpassing interest and importance to us, did we interpret

them with an inquiring mind, and diligently investigate them. The Society is now enriched by the nucleus of a library, consisting of some of the best standard works on chemistry and kindred sciences; also with a good microscope. With these additions to our store, surely the present session will be one of greater interest and enjoyment to all. I lay claim personally to a very little knowledge, but in the interests of this Society I would gladly read up on any given subject, that I might write a paper for the benefit of our members; and if all were willing to do the same, each selecting for himself a subject that he could handle with the greatest amount of pleasure to himself, the Society would be enriched by many valuable contributions in the way of papers, and the interest in its meetings would be very much augmented. We may not at this stage of our existence be able to interpret the more obscure and abstruse things connected with science and with nature, but by rendering ourselves familiar with the handwriting where the characters are distinctly legible, we may gradually learn to decipher the more obscure and difficult things connected therewith, and as we gradually break up fresh ground, decipher that which is obscure, sift out analogies, solve difficulties, each step in advance will make our progress more easy, until our enjoyment of study rises to enthusiasm.

"Let us then with one heart and one mind resolve to work—work harmoniously, energetically, and with a purpose. The future of homœopathy has claims upon us as well as the present; and we shall by every act of self-sacrifice do something not only to add to our own store of knowledge, but add lustre to the system which we advocate, and help forward a Society which may be destined to exercise an influence for good, as great and wide-spreading as that which is exercised by a similar society of the old school of medicine. That homœopathy is rapidly spreading, there is not a shadow of a doubt; and the time is fast approaching when homœopathic chemists will be established in all the principal and many of the smaller towns in England. Most of us are young, and it may be our happy privilege, if spared to reach the average number of years allotted to men, to look back with considerable interest and satisfaction upon the early difficulties and struggles of this Society, and be able to boast of the fact of having been connected with this institution from its commencement. In business life, jealousies and antipathies may arise; it always has been so, and most likely always will be, to the end of the chapter; but these are matters quite foreign to this Society, and do not come within the province of our meetings. We meet here to acquire and to impart knowledge; here we should bring every difficulty that may arise in the various processes connected with pharmacy; and not only should we bring our difficulties for solution, but every discovery that we make that will increase our knowledge of pharmacy proper, should be laid before our members, so that we may never meet without a difficulty of some sort being solved, or without some addition being made to our store of knowledge. 'There is a sort of economy in Providence, that one shall excel where another is defective, in order to make men more useful to each other, and mix them in society.' Hence the advantages of a Society like this. We become mutually helpful, and thereby fulfil the highest duties possible to each other. We have but three papers as yet promised by our members—the first 'On Causticum,' by Mr. Peal, which I shall have the pleasure of calling for presently; the second 'On the Preservation of Mother Tinctures,' by Mr. Ashton; and the third 'On the Employment of Glycerine in Homœopathic Pharmacy,' by Mr. Butcher; but I confidently hope that, ere this meeting is dissolved, we shall have three others promised, so as to complete our programme for the present session.

Dr. Madden, in the *Monthly Homœopathic Review*, publishes the following :—

### NOTICE TO HOMŒOPATHIC CHEMISTS.

Experiments are being conducted on behalf the Pharmacy Committee of the British Homœopathic Society, for the purpose of clearing up certain doubtful points in reference to some of the preparations in the new Homœopathic Pharmacopœia. It is my intention to notify the results in



this journal,\* so that the chemists may take advantage of the improvements as soon as they are made.

The following may, therefore, now be adopted:—

1. The unction tincture of *nux vomica* is better when prepared with Spirit of 20 O. P. than when proof-spirit is used.
2. The same is true of *ignatia amara*.
3. *Petroleum* is better when prepared by solution in rectified spirit than when triturated.
4. *Kali carbonicum* 3x must be made with proof-spirit in place of rectified spirit; 2 with spirit 20 O. P. and 5x is the lowest for which rectified spirit can be safely used.
5. *Calcarca acetica*.—Proof-spirit must be used in place of rectified spirit in making the original solution; and hence 1 must be also made with proof spirit; 3x with spirit 20 O.P.; 2 and upwards with rectified spirit.
6. *Iodium*.—All attenuations from 1x and upwards may be dispensed in tinctures, pills, or globules.

In the *Homœopathic World*, we find a rhyming summary of the virtues of the chief homœopathic medicines, signed J. T. We hold Mr. Tirrell, of Hanley, responsible for the authorship; but we are ready to apologize if we have guessed wrong. We can imagine some of our readers prescribing homœopathically for their customers after this, with as long and serious a face, as though they had studied the literature of the system from the days of Hahnemann downwards. We should have called the following lines a Royal Road (in other words, a short cut) to homœopathic practice. J. T. modestly entitles them,—

#### THE HOMŒOPATHIC ALPHABET.

- A stands for *Aconite*, foremost and best,  
Inflammation and Fever assuaging;  
B, *Belladonna*, so much in request  
When the dread *Scarlatina* is raging.  
C, *Chamomilla*, our childhood's good friend,  
Which no mother I trust will be wanting;  
D, *Dulcamara*, impaired health to mend,  
When abroad in the wet you've been jaunting.  
E is *Euphrasia*, so good for Weak Eyes,  
That by some 'tis called "Spectacle Breaker;"  
F is that *Ferrum*, Consumptives should prize,  
And apply ere they grow any weaker.  
G is *Gelsemium*, whose action so wide  
'Gainst Convulsions must aye prove a blessing;  
H, *Hepar Sulphur*, which, early applied,  
Will ease Croup though its e'er so distressing.  
I is *Ignatia*, Hysterics to cure,  
When brought on by ill-humour or grieving;  
J stands for *Juglans*, an antidote sure  
Against Rose Rash, if aught there's believing.  
K is for *Kali Bichromicum*, known  
To cure Chronic Bronchitis and Ulcers;  
L, *Lycopodium*, good, you must own,  
Indigestion's effects to annul, sirs.  
M is *Mercurius*, useful, I'm sure,  
For Sore Throat or for Glandular Swelling;  
N is *Nux Vomica*, noted to cure  
Indigestion, so mind what I'm telling.  
O points out *Opium*, given to ease  
Obstinate Constipation and Snoring;  
P is for *Phosphorus*, bad Coughs to appease,  
Which Consumptives are always deploring.  
Q is *Quinine*, 'gainst Debility good,  
And has proved of great use against Ague;  
R is *Rhus Toxicodendron*, which would  
Rheumatism soon cure, should it plague you.  
S stands for *Sulphur*, so useful you'll find  
When the Skin or the Eyes are affected;  
T stands for *Tartar Emetic*, pray, mind,  
Should Small-pox come, this is not neglected.  
U is that *Urtica Urens*, which some  
'Gainst Worm symptoms have found beneficial;  
V is *Veratrum*, should Cholera come,  
This has claims which are not superficial.  
W brings the useful *White Bryony* to view,  
Severe Coughs, aye, and Pleurisy curing;  
X, *Xanthoxylum*, a remedy new,  
Better health to our females ensuring.

\* *Monthly Homœopathic Review*.

Y calls that famed *Yellow Tincture* to mind—

*Calendula*—so soothing and healing;

Z points out *Zinc*, with its virtues defined,

When against Chronic Headache you're dealing.

## Chemistry and Pharmacy.

BY SIDNEY W. RICH.

### DETECTION OF ADULTERATIONS IN COPAIVA BALSAM.

DR. H. HAGER suggests tests for the detection of oil of *sassafras* and of turpentine in samples of balsam of *copaiva*. The presence of oil of *sassafras* in the balsam is detected as follows:—1 c.c. balsam and 2 c.c. concentrated sulphuric acid are mixed; after the mixture has cooled 20 c.c. of alcohol are added,—the mixture is heated to boiling, and then set aside. If the balsam be pure, after the addition of the alcohol, a milky grey-yellowish or pale reddish-yellow liquid is obtained, which on boiling becomes yellow, clear and transparent, a resinous compound settling to the bottom. If adulterated with oil of *sassafras*, the addition of alcohol produces a dark brown-red colour, becoming after boiling much darker, with a tint of violet, similar to the juice of black cherries. Oil of turpentine is readily detected by heating a few drops of the balsam dropped upon bibulous paper, in such a manner that no visible vapours are evolved. Oil of turpentine evaporates first, and is recognised by its odour. This test, however, is unreliable if the adulterant employed be Venice turpentine. The author invites experiments with the following test, which has given him good results: Five or six drops water and five to seven c.c. balsam are mixed in an evaporating dish with sufficient levigated litharge to form a thick semi-liquid mass. At a temperature of 20° to 25° C. a well-marked turpentine odour is given off if the balsam contain but 10 per cent. Venice turpentine, and even 5 per cent. may be still recognised.

### ON SULPHO-CARBOLATE OF ZINC.

Dr. A. B. Lyons communicates to the *American Journal of Pharmacy* a simple and economical process for the preparation of sulpho-carbolate of zinc. A crude sulpho-carbolic acid is first prepared in the usual way by heating together seventeen parts of sulphuric with sixteen parts of carbolic acid. This is diluted with ten times its volume of water, and saturated with carbonate of lead. Into the filtered solution of sulpho-carbolate of lead is introduced a quantity of pure granulated zinc equal in weight to the carbolic acid employed. At the end of twenty-four hours the solution will usually be found free from lead, giving no precipitate with sulphuric acid or potassium iodide. When quite free from lead, as indicated by these tests, the solution is decanted, heated to boiling, filtered, and evaporated to a small bulk to crystallize; or the evaporation is carried to complete dryness, the salt being obtained in the granular form. The salt procured in this way is of necessity free from sulphate, and yields fine large colourless crystals without any empyreumatic odour.

### SOLUBILITY OF GLUE IN GLYCERINE.

Mr. J. M. Maisch read before the Philadelphia College of Pharmacy an account of some experiments on the solubility of glue in glycerine, the results of which may be summed up as follows:—

1. Glue is soluble at the ordinary temperature in a large proportion of glycerine.
2. Glue is permeable by glycerine, slowly at the ordinary, more readily at an elevated temperature.
3. Glue swelled in consequence of the absorption of water, remains unchanged in appearance under glycerine, that is to say, even if the glycerine should abstract the water, the former will take the place of the latter liquid, thus preventing the shrinking of the glue.
4. Glue by continued digestion, dissolves completely in glycerine, gelatinizing on cooling.
5. The solution of glue in glycerine is accelerated by previous maceration in glycerine, and by increasing the temperature (doubtless, also, by increasing the pressure).
6. Glue thoroughly permeated by water dissolves in hot glycerine about as readily as it does in hot water.



The author considered that the behaviour of gelatine and glycerine to unite to a jelly of any desired consistence, might probably be made use of in pharmacy as a vehicle for medicines of an unpleasant taste. The antiseptic properties of glycerine would, doubtless, render such a jolly perfectly unchangeable, while its non-drying qualities would retain to the jelly its soft consistence. There is no difficulty in imparting to such a preparation any desirable flavour.

In analysis, gelatine is used to estimate the quantity of tannin contained in astringent vegetables. There has always been a difficulty connected with such operations, due to the changes which gelatine undergoes so very readily when in aqueous solution, thus rendering the making of a new solution and its titration necessary. The complete solubility of gelatine in even concentrated glycerine, and the well-known antiseptic quality of the latter, render it very probable that a solution of the former in even dilute glycerine may be kept unaltered for some time, in which case much time would be saved in such establishments where the assaying of tanning material has to be frequently performed.

#### BROMAL HYDRATE.

The *Medical Times and Gazette* has a note on the inquiries which have been instituted into the effects produced by the bromine compound corresponding with chloral hydrate. Allusion is made to the results published by Dr. Steinauer and Dr. Dougall, and attention drawn to the fact that the acrid and irritating effects of bromine are still to be met with in bromal. The doctors agree in many respects as to the symptoms produced by the administration of bromal hydrate, but on some points they are not in accord. Dr. Dougall says, "That while it appears theoretically possible to produce hypnosis and anæsthesia with bromal hydrate, it seems to me practically impossible, from its intense irritancy, and the large dose which would be necessary to evolve bromoform, sufficient to induce these conditions. I am therefore inclined to doubt the genuineness of the hypnosis and anæsthesia described by Steinauer."

#### A NEW MATERIAL FOR SUPPOSITORIES.

The solubility of glue in glycerine, of which details have been given above, has been utilized by Mr. Carre in the formation of a new material for suppositories, the formula for which has been given in the *Canadian Pharmaceutical Journal*. It may be used for the administration of any medicine except tannin. The material is prepared as follows:—

Take of Best Glue	...	...	...	4 oz.
Glycerine	...	...	...	8 "
Golden Syrup	...	...	...	2 "
Water	...	...	...	8 "

Soak the glue in the water at a temperature approaching 212° F. until quite soft. Mix the syrup and glycerine, add them to the glue solution, and boil until the mixture has lost about two ounces in weight; remove scum, and pour into an oiled mould or tray. The elastic substance thus produced will keep a long time, but gradually becomes more difficultly soluble. In preparing a suppository the composition is dissolved in a little warm water, the drug mixed with it, and the mixture run into a mould.

#### A MODIFICATION OF MARSH'S APPARATUS.

Mr. J. St. Clair Gray describes in the *Lancet* a modification of Marsh's apparatus, which in his opinion entirely obviates the disadvantages attending the use of this instrument. According to Mr. Gray, fallacies may arise in the use of the common form of this apparatus from the following causes: the frothing up which takes place if organic matters be present in the liquid operated on, and the possible deposition of carbon in or fracture of the trial tube; the use of metallic stop-cocks, which may abstract the arsenic from the gas which passes through them; and the use of corks, india-rubber tubing, &c., to connect the different parts of the apparatus, materials which may contain small quantities of arsenic. Mr. Gray proposes to remedy these defects by the interposition of a filter of spun glass in the path of the gas; by the use of glass stop-cocks in the place of metallic ones; and by the construction of a form of apparatus which admits of each part being fitted into the other by grinding, thus avoiding all necessity for the use of cork, india-rubber, &c.

#### THE PULVERIZATION OF CAMPHOR.

The *American Journal of Pharmacy* contains a note on the pulverization of camphor. Camphor is easily enough reduced to powder by rubbing with a few drops of alcohol; but after a short time the powder will aggregate to crystals, which have to be rubbed down again. If, however, the camphor is reduced to fine powder as above, and then intimately mixed with carbonate of magnesia in the proportion of 10 or 20 grains to the ounce, a powder is obtained which never cakes or forms crystals. H. F. Fish suggested, several years ago, a process in which a drachm of carbonate of magnesia was used to disintegrate 16 ounces of camphor, by dissolving the latter in alcohol and pouring the solution into a gallon of water in which the magnesia was suspended, and letting the whole settle, and collect in a filter.



#### CHRISTMAS NOVELTIES.

THE old gentleman\* is approaching us once more, with onemore year's burdens on his venerable shoulders, but still as ever, with hearty salutations. This year we see a tear in his bright old eye, and a cloud darkens his kindly old brow. For Europe is groaning with the sorrows of a murderous war, and mockery, indeed, would it be to send Christmas greetings to the saddened homes of France and Germany. Many centuries ago Christmas was the messenger of "Peace on earth, good-will to men." Millions will echo the prayer, that he may be charged with the same glorious proclamation yet once more.



#### THE STEREOSCOPIC COMPANY.

THE Stereoscopic Company's shop-windows in Cheapside and Regent-street, are not by any means the least attractive of the sights of London; and we often think, as we see the perpetual groups gazing into these galleries of art, that a deal of "conscience money" is due from the public to the Company for the large amount of free enjoyment thus obtained. But the Stereoscopic Company's Guinea Box has become quite an institution of the realm, and its *répertoire* of marvels is looked for with intense anticipation among hundreds of families. This year it is richer than ever. Its contents are thus designated:—The Protean Cabinet, the Wonderful Tub, the New Patent Drinking Flask, the Chameleon Gyroscope, the Magic Box of Beauty, the Dial Cyphergraph, and the Development of Species. The first is the invention of Messrs. Pepper and Tobin, and is an adaptation of their celebrated ghost delusion. With it the *neromancer* produces, from an apparently empty box, a rich profusion of anything he pleases. The Wonderful Tub will be the trick of the season. We are told it is the invention of a surgeon. With all respect for the unknown gentleman, we are confident he would have made a successful burglar; for he is able to extract the contents from a tub which is tied over and sealed down with the

\* We have taken the liberty to use Mr. Rimmel's block, which presents itself opportunely, and for the use of which we apologise, and express our thanks at the same time.



utmost imaginable devices for security, without disturbing the seals or knots. Of the other articles in the box, we may say that the Drinking Flask is a useful improvement, and the Dial Cyphergraph presents a means of communication perfectly secret and capable of the greatest variety. The rest of the contents are amusing and beautiful. The Company will also introduce to the world this Christmas, a remarkable puzzle, which they call the Borcan Paradox, which demands from philosophers a little consideration. A result is obtained which present knowledge of physical laws is not wide enough to explain. The Iris Fountain will win much admiration, and the Italian Problem is another clever trick. These, be it remembered, are all novelties, forming but a fraction of the varieties and beauties of the Stereoscopic Company's stock, which displays a marvellous amount of skill, ingenuity, and taste. Many chemists make an excellent addition to their stock by selling this class of goods.

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#### EUGENE RIMMEL.

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AN English Christmas without Mr. Rimmel would be worse than a Christmas without snow, which has so often been our lot of late years, and almost as bad as a Christmas without plum-pudding. This last is the worst of all; and the richer millions of our land ought not to be allowed so much as to look at the dainty little luxuries provided for their pleasure and amusement, until they have done something to make their poorer countrymen at least comfortable. Then, with a light heart, let them scatter among their friends the artistic little Christmas greetings and New Year's kindly wishes which are so abundantly provided, and by none so artistically and luxuriously as by Mr. Rimmel. England, therefore, has reason for congratulation that this gentleman, amphibious between London and Paris, has found himself at this season outside of the iron ring which surrounds the metropolis of our neighbours, and which we can hardly hope will relax its fierce grip even for Christmas salutations.

Rimmel's Perfumed Almanacs for 1871 are scarcely so novel in design as in former years, but they are richly perfumed with heliotrope. The Photographic Christmas Cards are new. These are, of course, perfumed, and the mottoes on them are handsomely illuminated. On one of the capital letters there is a space for a small photograph, the effect being very pretty. The Oracular Crackers are very cheap. They retail at only sixpence, and contain a little bottle of Eau de Cologne, and a design and motto grotesque in the extreme. With some newly-designed figures, which carry small bottles of scent in their stomachs, sachets, and the abundant variety of his former successes, Mr. Rimmel's stock is fully equal to the occasion.

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#### LOW, SON, AND HAYDON.

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THIS firm has a high reputation for first-class perfumery, and we are not surprised to find in their establishment a very tasteful assortment of Christmas presents. Messrs. Low, Son, and Haydon make up a series of miniature packages in imitation of portmanteaus, export cases, portemonnaies, and such like articles, which conceal bottles of scent or other varieties of the perfumery art. In sachets, Messrs. Low have the most tasteful and novel designs which we have seen. An elegant little embroidered velvet slipper, containing a silk foot of perfume, is a charming little gem. Quite new to us also is a cardboard box, made in exact resemblance of a bottle of German seltzer water, containing a bottle of perfume inside.

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#### McMASTER, HODGSON, AND CO.

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AMONG our perfumery houses we may now class this eminent Dublin firm. Three new perfumes, most appropriately designated, have been issued by them, each distinctive in character, and all worthy of the description of the Irish melodist, "rich and rare." "In Memoriam" is adorned with a portrait of the late Charles Dickens. "Lothair" is an excellent companion, Mr. Disraeli being faithfully portrayed on the label; and the sweetest of the three is patriotically described as "The Wild Flowers of Tullahogue." We may here mention that the Viscountess Beaconsfield and the Baron O'Hagan (Lord Chancellor of Ireland) have respectively done Messrs. McMaster and Co. the honour to accept the dedication of the last two perfumes. Samples were presented to these lofty personages, in handsomely carved caskets, which were acknowledged by notes as polite as those which more ordinary mortals might have been expected to write.

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#### MR. J. H. WHITBY.

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AT this gentleman's store, we find a most abundant variety of Christmas presents, got up in all styles, from the cheapest to the best. A classically designed little lamp, which turns out to be only a cardboard box, containing a bottle of perfume, is very pretty. The boxes of perfumery sent out by Mr. Whitby are very showy, and some of them are elegant. We cannot help noticing, too, their evident cheapness.

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#### PIESSE AND LUBIN.

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AT this laboratory of flowers reliance seems to be placed for seasonable patronage on the well-known high quality of the perfumery, and the ingenious playing with words in their new names, which has so often amused the fashionable world. "Love-Lorne" is the latest scent discovered by these gentlemen.

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#### J. C. AND J. FIELD.

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IN soap and candles, we come from the region of pure luxuries to the domain of every-day requirements; but we do not on that account, and of necessity, leave the realms of beauty. We have so lately referred to the Messrs. Field's manufactures—Ozokerit especially—that we need not recapitulate; but in our sketch of Christmas novelties, we could not leave their stock out. Their Cable candles are of really dazzling beauty; the King Alfreds which like Paupukeewis, are "barred with streaks of red and yellow," are thus barred, unlike him, for a useful purpose. As they burn, they note the progress of time, thus bringing us back to the days of our Saxon forefathers. The palm of excellence, we still think, belongs to the Ozokerits, which, we believe, now command an immense sale. The handsome style in which these are sent out is worthy of note. Messrs. Field's transparent honey soap is a worthy companion to their well-known "United Service."

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#### F. S. CLEAVER.

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WE noticed last year from this establishment the snowballs and new-laid eggs which were then brought forward—the former being soaps, the latter whited sepulchres, wherein are buried little bottles of scent. These again do duty, and are well worthy to be standard little bits of Christmas fun.



Mr. Cleaver's *chef-d'œuvre* this year we take to be what his warehouseman describes as the "redicule," a newly-designed and sweetly ornamented box, containing three bottles of perfume, and retailing at half-a-crown.

#### R. HOVENDEN AND SONS.

We do not meet with any special Christmas novelties at this establishment, but consider that we may introduce to our readers a new and very useful pattern of hair-brush which has been brought out by Messrs. Hovenden, the peculiarity being the length and roundness of the bristle part.

#### D. JUDSON AND SON.

"CAMPHORATED Glycerine" is an undoubtedly seasonable article, put up in 2 oz. fancy bottles and mounted on cards. Messrs. Judson also send out in the same style "pure" and "perfumed" glycerines.

#### CADBURY'S CHOCOLATE CREMES.

PASSING away from perfumery, we come to notice a really beautiful display of excellent and saleable articles in the way of food luxuries. We need not speak of the Chocolate Cremes themselves. If all persons do not agree with Linnæus in his estimate of the divine flavour of cocoa, there are few who do not enjoy it as an occasional luxury in this form. But besides their contents being good, the boxes in which these of Messrs. Cadbury are sent out, retailing at sixpence and a shilling each, are the most exquisite of their class which have ever come under our notice. A dozen or two of these on the counter, or in the window, would present a gay little picture gallery, attractive in the highest degree, and doing infinite credit to the artist who designed them. One of the drawings especially, representing a young lady with an ultra-fashionable hat, is particularly striking, and, we believe, was the design of Mr. Richard Cadbury. The same eminent firm has recently introduced under the title of Mexican Chocolate, a very superior article, which will not diminish the reputation won for Messrs. Cadbury's articles by the delicious flavour and remarkable purity of the Cocoa Essence which they had previously introduced.

#### HOWARD HALL, AND CO.

THE practice of inserting a sentimental couplet in a cracker with a bonbon, still retains its popularity. We suppose that part of the amusement of opening them consists in the execrable poetry which is always contained. It would be less trouble, and no more expense, to insert a motto from Shakespeare than to have printed such doggerel as this, for instance—

"Trust in those eyes of blue,  
To you they'll always be true."

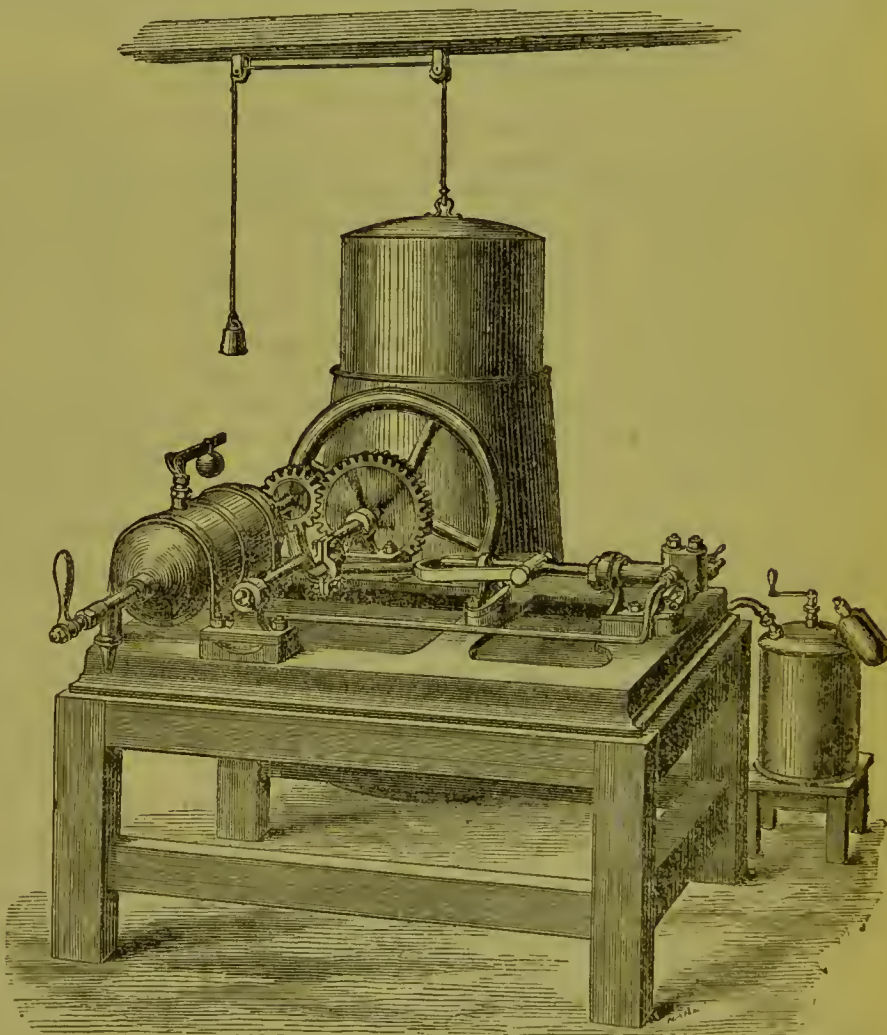
Apart from the poetry, however, Messrs. Howard Hall and Co. get up this class of article in a remarkably tasteful manner. The confectionery also enclosed is sure to be good if made by them.

#### PHAETON PENS.

It is a fine thing to be able to think rapidly and logically, but it is a particular annoyance to have a spluttering pen whereby to convey those thoughts to the world. Messrs. Macniven and Cameron, who have won so much reputation with their "Owl," "Pickwick," and "Waverley" pens, have now introduced another, which they appropriately designate the "Phaeton," we presume from the facility with which it gallops over the paper. In this respect it has an undoubted advantage. We find the use of these pens lightens the toil of writing very considerably.

#### PORTABLE SODA-WATER MACHINE.

HAYWARD TYLER AND Co. have recently manufactured a machine exactly similar to their larger ones in principle, but on a smaller scale throughout. It is intended to work up to forty dozens per diem, and is so constructed and packed that when removed from its case the latter forms a



stand. The machine is very compact, and sold at a moderate price. It was first intended for the use of regiments, and therefore made portable, but it is equally useful to chemists whose requirements are not sufficient to make it worth their having a more expensive machine.

#### MOHR'S GOLD SOLUTION.

THE above deserves to be immensely popular, both as a scientific amusement and as an article of real domestic use. By the use of it, and with the least possible trouble, all kinds of metallic goods can be beautifully gilded, provided only that they are clean. The process, of course, is electro-



galvanic, but its extreme simplicity will surprise even electricians.

It is only necessary to immerse the article in the solution, and then to touch it for a few moments with a thin strip composed of two metals and some silk for an insulator, when, presto! the farthing is changed into a guinea. The whole apparatus, with enough solution to gild a heap of articles, can be sold to the public at 1s. 6d. each. Messrs. Austin and Co, of Liverpool, who are the agents, supply the above in showy counter cases, each containing a dozen.

#### DESICCATED GLUE.

Mr. SPEIGHT, whose glue-pots are well known, though they cannot now be described as novelties, inasmuch as there are others in the market also, has prepared for use in them a very useful article under the above title. It is readily dissolved—much more readily than the ordinary glue. It is offered in penny packets, and is in the form of a very coarse powder.

#### AGNEW'S COD-LIVER OIL JELLY.

A DISH of this novelty was displayed in the Exhibition-room at Liverpool, when the Pharmaceutical Conference met there, with an invitation to visitors to help themselves. The article then had a very decided flavour of its chief constituent, and was not much sought after. Since then, however, Mr. Agnew has considerably improved his preparation, and from samples sent to us, which we have carefully tested, we judge that it undoubtedly offers advantages. It contains 72 per cent. of cod-liver oil, and though it has a slightly fishy taste, it is not unpleasant. For children, and for persons who find it difficult to get into the habit of taking the oil, we believe this jelly would be of good service.

We hold over a notice of several new hair restorers which have reached us.



#### OUR LIBRARY TABLE.

WE have to acknowledge from their respective publishers the following works, which we shall take an early opportunity of noticing more fully:—The second edition of Bentley's "Manual of Botany" (Churchill), which has not been issued a single day before it was wanted; "Lessons in Elementary Physics," by Professor Balfour Stewart (Macmillan); "The New Theory and Practice of Medicine," by Wm. Hibbert (Manchester); and Professor Miller's "Text Book of Inorganic Chemistry" (Longmans).

"Printing at Home" is the title of a little work, published by Mr. Jabez Francis, of Rochford, Essex. To amateur printers its simple and precise instructions will be very serviceable.

The *Chemists' and Druggists' Almanack and Diary* this year appears in such improved style that we do not hesitate to characterize it "the gem" of the diaries. The arrangement of the diary proper is of the most novel and elegant description; the paper and typography are of the first class, and in addition to the varied information especially compiled for chemists and druggists, it is further enriched by some well-written articles on subjects of general interest to the profession, from the pens of the most distinguished authorities of the day, the most prominent of which are a review of the Progress of Pharmaceutical Chemistry during the Past Year, by Professor Attfield; and a most valuable paper by S. W. Rich, entitled "Chemical Tests for Medicinal Articles."—*British Trade Journal*.

## Corner for Students.

CONDUCTED BY RICHARD J. MOSS.

The chemical formulæ employed in this section are based upon the new system of atomic weights, unless the use of the older system is specially indicated. In the *British Pharmacopœia* the symbols corresponding to those adopted here are printed in heavy Clarendon type. The new editions of Fownes's *Manual of Chemistry*, and Attfield's *Chemistry: General, Medical, and Pharmaceutical*, supply the data required for calculations, and are recommended as text-books.

### QUESTIONS.

#### First Division.

I. QUALITATIVE ANALYSIS.—A sodium salt (dry) is heated with potassium chromate and concentrated sulphuric acid, a brown gas is disengaged and condenses into a blood-red liquid; on adding ammonia to the liquid the colour changes to yellow, and upon adding nitric acid to this mixture the colour changes to a reddish-yellow. What is the salt? Give the name and formula of the blood-red liquid, and explain the changes which take place on the addition of ammonia and the acid.

II. ORGANIC ANALYSIS.—An organic acid has been found to contain in 100 parts

Carbon, 60.87;  
Hydrogen, 4.35;  
Oxygen, 34.78.

The analysis of the silver salt of this acid has given the following result:—1.052 parts of the silver salt left, upon ignition, 0.4637 parts of metallic silver. What is the formula of the acid?

III. GAS VOLUME.—How many grammes of sulphur are there in 5 litres of sulphur dioxide measured at 15° C., and 745 m.m. pressure? (1 litre of hydrogen at the standard temperature and pressure weighs 0.0896 of a gramme.)

IV. HEAT.—If one pound of snow at 0° C. is mixed with an equal weight of water at 84°, what should be the temperature of the mixture? If heat is applied to one pound of this mixture, so as to convert it into steam, having a temperature of 100° C., how many pounds of water might have been raised from 40° to 41° by the amount of heat required for the production of the steam?

V. SPECIFIC GRAVITY.—A fluid of sp. gr. 1.27 is mixed with five times its bulk of another fluid having a sp. gr. of .94; what is the specific gravity of the mixture, supposing no chemical action to take place?

#### Second Division.

I. LIQUOR AMMONIÆ FORTIOR, B.P.—What impurities should be detected by the officinal tests for the purity of this liquid?

II. ANTIMONIUM TARTARATUM, B.P.—In the preparation of this substance by the officinal process 8.757 ounces of crystals were obtained. What loss per cent. on the theoretical product does this quantity represent?

III. MARSH GAS.—Mention some of the natural sources of this gas, and describe, with the aid of formulæ, a process by which it may be prepared.

IV. AIR.—How many litres of air containing 23 per cent. of oxygen by weight, are required for the combustion of 100 grammes of carbon? (1 litre of air at the ordinary temperature and pressure weighs 1.226 grammes.)

V. SPECIFIC GRAVITY.—If 150 grains of a solid be introduced into a bottle holding 420 grains of alcohol sp. gr. .84, and the contents of the bottle are then found to weigh 542 grains, what is the specific gravity of the solid?

### ANSWERS.

#### First Division.

I. QUALITATIVE ANALYSIS.—The following process is the one usually employed for the examination of urine for glucose; it is known as Trommer's test. Add to the urine a solution of potassium hydrate in tolerable excess, if a precipitate is produced, as is frequently the case, filter, and to the filtrate add a few drops of a very dilute solution of cupric sulphate. If sugar is present, the precipitate which first forms is re-dissolved on shaking, and the fluid becomes of a clear blue colour. This blue solution is then heated to boiling, whereon a yellow cloud (hydrated cuprous oxide) forms, and speedily changes to a red precipitate (cuprous



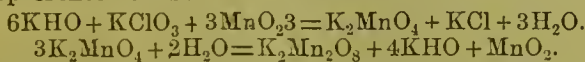
oxide). A solution of cupric tartrate may be substituted with advantage for the solution of cupric sulphate.

II. **ORGANIC ANALYSIS.**—The composition of the body is represented by the formula  $C_2H_4O$ . As .33 of a gramme of the substance gave .66 of a gramme of carbon dioxide containing  $\frac{1}{3}$  of carbon, it is evident that the carbon present weighs  $\left(\frac{.66 \times 12}{44} =\right)$  .18 of a gramme. The water found is .27 of a gramme, so that the hydrogen present must be  $\left(\frac{.27 \times 2}{18} =\right)$  .03 of a gramme; the remainder of the substance consisted of oxygen, which therefore weighed  $(.33 - (.18 + .03) =)$  .12 of a gramme. Dividing these numbers by the relative atomic weights, we have—

$$\begin{aligned} \text{Carbon} & .18 \div 12 = .015 \\ \text{Hydrogen} & .03 \div 1 = .03 \\ \text{Oxygen} & .12 \div 16 = .0075 \end{aligned}$$

Taking the quantity of oxygen as unity these numbers correspond with the formula  $C_2H_4O$ . According to this formula the molecular weight of the substance is 44, and therefore the theoretical vapour density is 22, which is the same as that ascertained by experiment.

III. **POTASSÆ PERMANGANAS, B.P.**—The theoretical product of the officinal process for the preparation of this substance is 4.702 ounces. The reactions which take place may be represented thus:—



The product in this case must be calculated from the quantity of potassium hydrate employed, as the quantities of the other substances ordered are slightly in excess. According to the equation, six molecules of potassium hydrate  $(56 \times 6 = 336)$  produce one molecule of potassium permanganate (316); the product of 5 ounces of the former substance is therefore found by the following proportion:—

$$336 : 5 = 316 : 4.702.$$

IV. **WATER.**—When the temperature of a body of water is lowered, say from  $15^\circ C$ , the cold water being the more dense sinks to the bottom, and thus the temperature of the lower portion of the water appears to fall more rapidly than that of the upper portion; until the temperature of  $4^\circ$  is attained. At this point the water instead of contracting, begins to expand, consequently the cold water ceases to sink, and the temperature of the upper stratum falls more rapidly; when solidification takes place the expansion becomes violent and sudden. But for this anomaly in the behaviour of water, ice instead of floating on the surface would sink as rapidly as it was formed, and as a consequence a continuance of cold weather would have the effect of converting lakes and rivers into solid masses of ice, and thus destroying their inhabitants. The violent expansion of water, freezing in the crevices of rocks, is the principal means by which their disintegration is effected.

V. **SPECIFIC GRAVITY.**—The weight of the plank of wood is 117.1875 pounds. The wood and metal displace 40.5 grains of water, but the metal alone displaces 3 grains of water, consequently the wood by itself should displace  $(40.5 \div 3 =)$  37.5 grains of water, but its weight in air is 22.5 grains, therefore the specific gravity of the wood is  $\left(\frac{22.5}{37.5} =\right)$  .6. The plank contains  $(10 \times 1.25 \times 25 =)$  3.125 cubic feet, and as one cubic foot of water weighs 62.5 pounds, the plank must weigh  $(3.125 \times 62.5 \times .6 =)$  117.1875 pounds.

*Second Division.*

I. **ACIDUM HYDROCYANICUM DILUTUM, B.P.**—The theoretical product of the officinal process is 21.658 fluid ounces. The following equation represents the reaction—



According to this equation two molecules of potassium ferrocyanide (844) are required for the production of six molecules of hydrocyanic acid (162); the product of 2.25 ounces of the potassium salt is therefore found by the following proportion—

$$844 : 2.25 = 162 : x \therefore x = .43187.$$

As the sp. gr. of the officinal acid is .997, one fluid ounce of it weighs .997 of an ounce, it contains  $\frac{1}{30}$ th of real acid, or  $\left(\frac{.997}{50} =\right)$  .01994 of an ounce; therefore, the quantity of

this acid produced is equivalent to  $\left(\frac{.43187}{.01994} =\right)$  21.658 fluid ounces

II. **SULPHURIC ACID.**—The quantity of sulphuric acid which may be produced from one ton of the iron pyrites is 2929.201 pounds. By the process usually employed for the manufacture of this acid from iron pyrites all the sulphur is converted into sulphuric acid. The ore contains 77.5 per cent. of iron disulphide; one ton or 2240 pounds therefore contains  $\left(\frac{77.5 \times 2240}{100} =\right)$  1736 pounds of this salt, the molecular weight of which is 120, but one molecule of it is equivalent to two molecules of sulphuric acid (196); accordingly, to find the product of 1736 pounds of iron disulphide, we have the proportion—

$$120 : 1736 = 196 : x \therefore x = 2835.466.$$

Now one pound of the officinal acid contains .968 of a pound of real acid, therefore, 2835.466 pounds of real acid are contained in  $\left(\frac{2835.466}{.968} =\right)$  2929.201 pounds of the officinal acid.

III. **HEAT.**—According to the dynamical theory, heat is regarded as consisting in a state of molecular motion. This theory rests on the assumption that the particles of all bodies are in constant motion; the molecules of gases, for example, are supposed to have a progressive and a rotatory motion, and the constituent atoms are also supposed to vibrate within certain limits. The total quantity of heat in the gas is made up of the progressive motion of the molecule; together with the vibratory and other motions of the constituent atoms; but the progressive motion alone, which is the cause of the expansive tendency, determines the temperature. An increase in the velocity of the particles of a body causes an increase of temperature, and when the velocity of the particles is diminished the result is a decrease of temperature.

IV. **CHEMICAL AFFINITY.**—The production of calcium carbonate when a solution of calcium chloride is mixed with a solution of ammonium carbonate, is mainly due to the fact that the cohesive tendency of the particles of calcium carbonate is incapable of being overcome by the weak affinity which water possesses for this substance—in other words, it is insoluble, and being precipitated, must be withdrawn from the sphere of chemical action. When calcium carbonate is heated with ammonium chloride, ammonium carbonate is produced, because this substance is gaseous at the temperature at which the reaction takes place; it is therefore withdrawn from the presence of the other substances as quickly as it is produced.

V. **SPECIFIC GRAVITY.**—The glass ball should weigh 1.8332 grammes in hydrochloric acid, 1.1234 grammes in nitric acid, and —0.0314 of a gramme in sulphuric acid. The ball displaces 2.73 grammes of water, but as the sp. gr. of hydrochloric acid is 1.16, this quantity of water is equivalent in volume to  $(2.73 \times 1.16 =)$  3.1668 grammes of this acid; the ball should therefore weigh  $(5 - 3.1668 =)$  1.8332 grammes in hydrochloric acid. In a similar manner the ball is found to displace 3.8766 grammes of nitric acid, and 5.0314 grammes of sulphuric acid; it therefore weighs  $(5 - 3.8766 =)$  1.1234 grammes in the former, and —0.0314 grammes in the latter acid.

*Prizes.*

The First Prize for the best answers to the questions of the First Division printed in our November number, has been awarded to

RICHARD W. GRIFFITH (B.P.), 146, High-st., Southampton, Who has already gained two prizes in this division.

The Second Prize for the best answers to the questions of the Second division has been awarded to

W. J. CROGAN, 46, Holloway Head, Birmingham.

*Marks awarded for Answers.*

	First Division.						Total.
	I.	II.	III.	IV.	V.	E.	
B. P. (1st prize) .. ..	8	5	6	8	5	3	35
N. Coaker .. ..	6	5	6	6	5	3	31
A. E. I. .. ..	4	5	6	7	5	3	30
J. W. Smith .. ..	9	5	0	7	5	2	28
J. Young .. ..	5	5	5	5	5	3	28
Medicus .. ..	3	2	6	7	5	3	26
Otho .. ..	7	5	0	7	1	2	22



## Second Division.

	I.	II.	III.	IV.	V.	E.	Total.
G. J. Croghan (2nd prize) ..	6	0	6	4	5	3	24
F. W. Fletcher ..	0	6	6	4	3	3	22
E. R. A. M. ..	5	6	0	2	5	3	21
Spes ..	0	6	0	5	5	3	19
G. Spiers ..	0	0	5	5	5	3	18
Graham ..	0	5	3	4	0	3	15
Non nobis ..	0	2	4	4	4	1	15
W. J. Smith ..	0	0	4	3	5	2	14
S. T. S. ..	0	5	4	3	0	1	13
Limax ..	0	0	5	1	0	3	9

## TO CORRESPONDENTS.

\* \* All questions forwarded to us for publication in this "Corner for Students" should be accompanied by the answers which the propounders believe to be correct. Communications should include the names and addresses of the writers; those which reach us after the first day of the month will be disregarded.

Prizes.—The students to whom prizes are awarded are requested to write at once to the publisher naming the book they select, and stating how they wish it forwarded.

A. E. I.—I. Quarter of an hour is too long a time to continue the boiling, because there are several other substances besides glucose which cause the separation of cuprous oxide from alkaline solutions of copper if the boiling is prolonged.

J. W. Smith.—III. There is more manganese dioxide employed than is theoretically required, and of course the excess does not take any part in the reaction.

J. Young.—III. You overlooked the third word in the question.

Medicus.—I. On the addition of one of the caustic alkalies to urine, a precipitate is almost invariably formed, consisting of some of the phosphates of the alkaline earths; this precipitate should be separated by filtration before adding the copper solution.

Otha.—V. Decimal point misplaced.

F. W. Fletcher.—I. You neglected to take into consideration the water of crystallization in the potassium ferrocyanide. The number of marks obtainable is entirely dependent on the nature of the question; the marks awarded are intended to indicate the relative value of the answers.

Spes.—III. You appear to have misunderstood this question.

Non Nobis.—II. Error in the first proportion.

S. T. S.—II. The answer should have been given in pounds.

Limox.—I. Only one half of the cyanogen which takes part in this reaction enters into the constitution of the acid. IV. It would be impossible to account for such phenomena on the grounds of affinity alone.

J. B. S.—Your questions are not at all new to us; something original would be more acceptable.

## Books offered as First Prizes.

- Attfield's *Chemistry: General, Medical, and Pharmaceutical.* (Van Voorst.)  
 Brooke's *Elements of Natural Philosophy* (Churehill.)  
 Conington's *Handbook of Chemical Analysis; with Tables of Qualitative Analysis adapted to the same.* (Longmans.)  
 Eliot and Storer's *Manual of Inorganic Chemistry.* (Van Voorst.)  
 Fownes's *Manual of Elementary Chemistry.* (Churehill.)  
 Fresenius's *Qualitative Analysis.* (Churehill.)  
 Galloway's *Qualitative Analysis.* (Churehill.)  
 Ganot and Atkinson's *Elementary Treatise on Physics.* (Longmans.)  
 Garrod's *Materia Medica; with Modern Chemical Notation.* (Walton.)  
 Noad's *Chemical Analysis, Qualitative and Quantitative.* (Reeve.)  
 Northcote and Chure's *Qualitative Analysis.* (Van Voorst.)  
 Odling's *Outlines of Chemistry.* (Longmans.)  
 Royle and Headland's *Materia Medica.* (Churehill.)  
 Williamson's *Chemistry for Students.* (Clarendon Press.)  
 Barff's *Introduction to Scientific Chemistry.* (Groombridge.)  
 [Any other scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.]

## Books offered as Second Prizes.

- Bloxam's *Laboratory Teaching.* (Churehill.)  
 Church's *Guide for Students in Agricultural Chemistry.* (Van Voorst.)  
 Galloway's *First Step in Chemistry.* (Churehill.)  
 Gill's *Chemistry for Schools.* (Walton.)  
 Hofmann's *Introduction to Modern Chemistry.* (Walton.)  
 Huxley's *Lessons in Elementary Physiology.* (Macmillan.)  
 Oliver's *Lessons in Elementary Botany.* (Macmillan.)  
 Orme's *Introduction to the Science of Heat.* (Groombridge.)  
 Potts's *Elements of Euclid.* School Edition. (Longmans.)  
 Roseoe's *Lessons in Elementary Chemistry.* (Macmillan.)  
 Wormoll's *Elementary Course of Mechanics.* (Groombridge.)  
 Wurtz's *History of Chemical Theory.* Translated by Watts. (Macmillan.)  
 [Any other scientific book which is sold for about five shillings may be taken as a second prize.]

SENSIBLE people do not wear their best clothes when they do dirty work. It is not economical. Neither do sensible people burden and wear out their brains with the remembrance of all the petty details which a business life entails. The brain is worthy of better work than that. A diary saves its cost 365 times over in the course of the year, and the "Chemists' and Druggists' Almanack and Diary" being compiled with express regard to the requirements of the trade, is doubly of service to the trade. The value of its special information is extreme, and taking it altogether, the Educational Department and Leone Levi in the bargain will not be able to calculate the exact worth of this wonderful book. Its price at our office is 1s. bound in boards (neatly), 1s. 6d., in cloth, gilt (sweetly). Postage of either, 2d. extra.



CHEMICAL SOCIETY.—Nov. 17TH.

PROFESSOR WILLIAMSON, F.R.S., PRESIDENT, IN THE CHAIR.

THE following papers were read:—"Mineralogical Notices," by Professor MASKELYNE and Dr. FLIGHT. The contents of this communication were:—

## 1. On the formation of basic cupric sulphate.

In 1867, Mr. PISANI described a mineral which he supposed to be the Woodwardite of Mr. Church. The substance, however, is not the latter material. It had previously been examined in the laboratory of the British Museum, and the results sufficiently tallied with those of Mr. Pisani to identify the mineral.

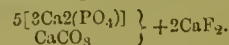
The only interest this mineral offers is in the light it seems to throw on the possible modes of the formation of native basic cupric sulphates. The actions of solutions of magnesium or calcium sulphate on malachite may terminate in the production of Langite. An experiment in the laboratory showed that an insoluble cupric sulphate and acid magnesium carbonate were actually formed.

## 2. Opal from Waddela Plain, Abyssinia.

Mr. Markham presented to the British Museum some remarkable specimens of green opal from the above locality. Its analysis showed it to consist of about 92 per cent. of silica, 6 per cent. of water, and the remainder was iron, manganese, calcium, and magnesium.

## 3. Francolite, Cornwall.

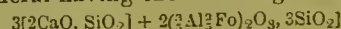
Its analytical numbers point to the formula.



It is, in fact, a fluor-apatite in which one equivalent in every six of the calcium phosphate is replaced by carbonate. The crystallography of this mineral seems also to point to its not being ordinary apatite, and, in fact, to its not being the same mineral as the original Francolite from Wheal Franco.

## 4. Epidote and Serpentine, Iona.

A pebble in which a green mineral traverses bright red felspar and quartz in veins was sent by the Duke of Argyll to the British Museum. Its analysis leads to the view that it consists of a lime epidote with some 23 per cent. of quartz, the former mineral having the following constitution:—



Two specimens of serpentine of the same locality gave the general formula:—



where R represents in one case Mg, with a little Fe and Ca; in the other Mg, with nearly one-fifth of its equivalent of an equal mixture of Fe and Mg.

## 5. Vivianite.

Two kinds of this mineral were found in an unknown Cornish locality. The one is of a pale bluish tint, the other of a brownish colour. Both proved to be octahydrated ferrous orthophosphate,  $3\text{FeO} \cdot \text{P}_2\text{O}_5 \cdot 8\text{H}_2\text{O}$ , and the difference in the colours can only be ascribed to some minute difference in the degree of oxydation of the iron.

## 6. Cronstedtite.

The analysis of this mineral presented considerable difficulties, inasmuch as it was extremely difficult to free it from the substances with which it is found. The Cronstedtite in question possesses an unusual interest from a crystallographical point of view, being one of the best defined types of hemimorphism.

## 7. Pholerite.

This mineral, derived from India, is of a pale flesh white, penetrated in several places by patches and veins of a black mineral. A new name was proposed for this mineral, but the analysis shows it to be nothing but pholerite.

Mr. CHURCH observed that it was a matter of congratulation to have those beautiful specimens which are stored in our magnificent national collections investigated in so excellent a manner as the contents of the paper just read have shown.



The next communication was a note by Mr. CHAPMAN on the "Oxides of Nitrogen." In a paper read at the last meeting of the Chemical Society, Mr. Chapman mentioned that he had quantitatively estimated nitric oxide by converting it into nitric acid, and determining the latter by the production and weighing of the baryta salt. Objections were then raised as to the possibility of the completeness of such a conversion. Mr. Chapman now endeavoured to show by referring to well-known chemical facts, that whether  $N_2O_5$ ,  $N_2O_4$ , or  $N_2O_3$  be formed when NO is left with excess of oxygen over water, the final result must be the transformation into nitric acid.

Mr. HARCOURT reasserted that on his passing nitric oxide into oxygen, he obtained as result nitric peroxide; when reversing this order and passing oxygen into nitric oxide a mixture of  $N_2O_4$  and  $N_2O_3$  seems to be formed.

Mr. CHAPMAN replied that the different results obtained by Mr. Harcourt and himself were, in all probability due to differences of the temperatures at which the respective experiments had been executed.

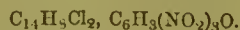
Professor WILLIAMSON took occasion of this repeated mentioning of nitric peroxide to remark that this compound may be viewed as  $\left. \begin{matrix} NO \\ NO_2 \end{matrix} \right\} O$ , i.e., as water in which the one, hydrogen was replaced by NO, the other by  $NO_2$ .

#### DECEMBER 1ST.

The following gentlemen were elected Fellows:—H. E. Armstrong, Ph. D.; R. Barklie; W. L. Carpenter; T. M. Crafts, Professor of Chemistry in Cornell University; J. Dewas; T. Farries; R. Mallet, F.R.S.; and Dr. Ogg. Mr. Perkin, F.R.S., read a paper "On some Derivatives of Anthracene." This was a detailed account of some anthracene derivatives, more particularly of the products resulting from the action of sulphuric acid upon dibrom- and dichlor-anthracene.

Dichloranthracene is most conveniently prepared by passing chlorine gas over benzole, holding about one-fifth its weight of purified commercial anthracene in suspension, until the mixture becomes a crystalline mass. The product is then brought on a linen filter, drained, washed with cold benzole, dried, and then further purified by distillation and subsequent recrystallization from benzole. Thus obtained, it appears in yellow golden needles. The mean of several analyses gave 67.91 per cent.  $C_3$ , 34H, and 28.70 per cent. Cl, which numbers agree perfectly with the formula of Graebe and Liebermann,  $C_{14}H_8Cl_2$ .

Dichloranthracene, when gently heated, sublimes in beautiful needles, which may be obtained of considerable size. It is fluorescent in the solid state as well as when in solution. When a boiling solution of dichloranthracene in benzole is added to a similar solution of picric acid, the mixture assumes a dark orange-red colour, and on cooling becomes filled with small bright-red needles. These consist of a compound of dichloranthracene and picric acid. A determination of the dichloranthracene in this body gave numbers closely approximating to those required by the formula—



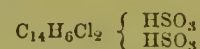
**DIBROMANTHRACENE.**—This product was prepared by Graebe's process. It was, however, purified first by distillation and then by crystallization from benzole. Thus obtained, it is of a golden-yellow colour. It gave, on analysis, numbers closely agreeing with those required by the formula—



Like dichloranthracene, this body produces a beautiful red compound with picric acid.

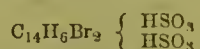
**ACTION OF SULPHURIC ACID ON DICHLORANTHRACENE.**—Dichloranthracene, when submitted to the action of fuming sulphuric acid, dissolves, forming a bright-green solution, and is, at the same time, converted into a sulpho acid. To prepare this acid, one part of dichloranthracene is added to about five parts of fuming sulphuric acid, and the mixture heated for a short time on the water bath. It is then gradually poured into several times its bulk of water, and treated with carbonate of barium until all the sulphuric acid is neutralized. The acid solution, when filtered off from the sulphate of barium, is evaporated to a small bulk. When sufficiently concentrated, it becomes, on cooling, a

shiny mass of minute orange-yellow coloured crystals which may be drained on a porous tile. This acid has not been analysed, but, from the composition of its salts, evidently possesses the formula—



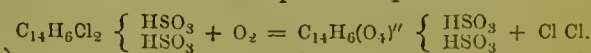
Mr. Perkin, therefore, proposes to call it disulphodichloranthracenic acid. It is easily soluble in water, from which it is precipitated upon the addition of a little concentrated sulphuric or hydrochloric acid. It possesses a strongly acid taste and character. The acid forms salts with sodium, barium, calcium, and strontium. The barium salt is remarkable for its insolubility in hydrochloric acid.

Dibromanthracene yields with strong sulphuric acid an analogous disulphodibromanthracenic acid—

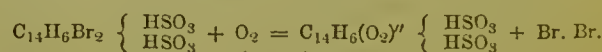


Its sodium, barium, &c., salts are similar to the salts of disulphodichloranthracenic acid.

**OXIDATION OF DISULPHODICHLORO- AND DISULPHODIBROMANTHRACENIC ACID.**—These sulpho acids, when subjected to the influence of oxidizing agents rapidly decompose, exchanging their chlorine or bromine for oxygen, and are thus converted into disulphanthraquinonic acid.

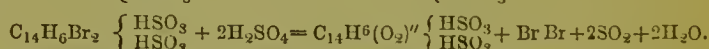
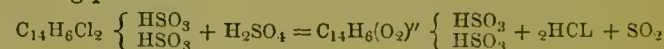


Disulphodichloranthracenic acid. Disulphanthraquinonic acid.



Disulphodichloranthracenic acid. Disulphanthraquinonic acid.

An analogous result is also obtained by treating them with concentrated sulphuric acid, the following reactions taking place:—



Anthracene when pure in large crystals, shows a beautiful fluorescence, and so do many of the anthracene products, though curiously their solutions are comparatively poor in this respect. Anthracene and dichloranthracene in the state of vapour are not at all fluorescent, and, moreover, a ray of light sent through the length of about four inches of the vapour of either body still retained its power of rendering fluorescent bodies luminous. The experiments in this direction are, however, not yet concluded.

On sealing up anthracene in a long vacuum tube with platinum poles, and allowing the discharge from an induction coil to pass through the tube, nothing particular is observed, except the beautiful fluorescence of the crystals of anthracene. On examination with the spectroscope, the light showed carbon and nitrogen lines, the latter arising from the presence of a little air in the tube. Upon heating the tube, however, somewhat strongly, so as to volatilize the hydrocarbon, the ordinary colour of the discharge changed to a magnificent deep azure-blue, and what is remarkable is, that this blue light, when examined with the spectroscope, is perfectly continuous, and consists of blue, with a little green.

Dichloranthracene, when treated in a similar manner, gives an analogous result, but suffers a good deal of decomposition, anthracene changing but little. These curious results do not appear to be due to the fluorescent character of the substances employed, as naphthalene produces a similar effect, the blue light, though not so intense, being continuous. It must be observed, however, that this hydrocarbon undergoes considerable change, becoming brown and oily.

Anthracene heated in a vacuum tube in the same way, gives a greenish blue light, showing faint carbon bands.

On exposing a solution of disulphodichloranthracenic acid to the light of one of the recent displays of the aurora borealis, it was very strongly illuminated, as might be expected. Moonlight, on the other hand, had no perceptible effect upon it, nor yet an alkaline solution of esenline.

Mr. Perkin illustrated his interesting communication by a series of most beautiful experiments. The Society then adjourned to December 15th.



## LONDON CHEMISTS' ASSOCIATION.

THURSDAY, OCT. 27TH.

Mr. WEAVER in the Chair. Mr. JESSOP read a paper on "Dietetic Preparations." He said that the demand for farinaceous foods for infants and invalids had called forth such an immense supply that the market was overstocked. Most infants' foods were composed principally of starchy matter under various modified conditions, small quantities of other substances being sometimes added. Many of them were alike in everything but name. A new name, however, would frequently please the fancy and stimulate the appetite of a nervous invalid. It was necessary not only to know whether a commercial article of infants' food was in itself pure, and of the best quality, but also whether its composition was suited to an infants' requirements. Food substances, Mr. Jessop observed, were classed into three divisions—namely, 1st, Nitrogenous matters, as fibrin, albumen, casein, and gluten; 2ndly, Hydrocarbonaceous substances, such as sugar and starch; 3rdly, Fatty matter. Those of the first class were assimilated by the gastric juice; those of the second, by the salivary secretion; and those of the third, by the pancreatic juice. Upon these facts Liebig based his ideas as to what would be the proper food for infants deprived of their natural support. Condemning starch in its disintegrated form, he compounded a mixture which in its heat and blood-producing qualities nearly resembled human milk. He used diluted cow's milk (identical with the animal diastase of the saliva) converted the starch of the flour into grape sugar. A little bicarbonate of potash was also added to neutralize the acidity of cow's milk. This preparation, however, required care, boiling, stirring, and straining, which occupied too much time. To remedy this, some of our infants' food manufacturers had ground the ingredients to a fine powder, proposing that boiling milk and water should simply be added to it. But by this method much of the starch was *not* converted into grape sugar. Another plan was to digest the coarsely powdered malt with flour and water at a proper temperature until perfect reduction of the starch had taken place. The resulting sweet liquid was then poured off and evaporated either to dryness or to the consistence of syrup. It then only required the addition of proper proportions of boiling milk and water. Several foods were now prepared by modifications of Liebig's original process. Among these were "Mellin's Patent Extract for Preparing Liebig's Concentrated Milk," "Mallard's Liebig's Malt Extract," "Savory and Moore's Liebig's Infants' Food," "Kohl's Malt Extract," (Savory and Moore), and "Loefland's Malt Food," (Van Abbot). Hard's, and some other farinaceous foods, were composed principally of baked flour. These, as well as biscuits, and biscuit powder, from the quantity of gluten they contained, were useful articles. Mr. Jessop next noticed sugar of milk. He said that one part of it mixed with nine parts of cow's milk formed a food possessing nearly all the properties of human milk. Condensed milk he characterised as one of the most useful of recent additions to our stock of concentrated foods. According to Liebig's report, it contained all the constituents of fresh milk, even to the unbroken butter globules. It was prepared by simply evaporating the fresh product at a low temperature, and adding about 33 per cent. of cane sugar. One hundred parts contained twenty-three parts water and seventy-seven solid matters (butter, sugar of milk, cane sugar, and cheese particles). "Sea Moss Farine," and its gay advertisements, were just noticed. Extract of meat, prepared by Liebig's process, Mr. Jessop remarked, had, within the last few years, gained a world-wide notoriety. Various opinions were expressed, some in its favour, and some against it. No doubt, as an addition to soups and gravies it was extremely useful, and as a nutritive agent, being easy of digestion and quickly prepared for use, it was of great value to invalids. The chief objection to its use was the peculiar burnt flavour it possessed. Gillon's Essence of Beef, he said, was a much more pleasant preparation and a better representative of fresh meat; but, unfortunately, it would not keep long on exposure to the air. Meat biscuits, meat lozenges, and meat cocoas were briefly spoken of. In conclusion, Mr.

Jessop gave an interesting account of cocoa. He spoke of its introduction from South America into Spain by Columbus in 1520, and its subsequent importation to England. He described the plant itself, the method of roasting or "sweating" the nibs, and the composition of the various preparations now so extensively sold.

A short discussion took place, principally on extract of meat. It was thought by some that its merits as a nutritive agent were somewhat over-rated.

A vote of thanks was given to Mr. Jessop and to the Chairman.

THURSDAY, NOV. 3RD.

Mr. TAUBMAN in the Chair. Mr. BEYNON read a paper on "Dispensing Arrangements." He commenced by describing the dispensing counter itself. He said it should be about three feet high, the length, of course, would vary according to circumstances; the top should be of unpolished mahogany at least an inch thick; there should also be a screen in front with three shelves on the inner side; the outer side could be made ornamental or not, according to fancy. Some pharmacutists, he said, objected to the screen, preferring an entirely open counter; but that frequently subjected the dispenser to annoying interruptions from patients. The counter should be placed where a good light was obtainable. Of the three shelves on the inner side of the screen, the bottom one should be for extract and pill jars, the middle one for tincture bottles, and the upper one for powder bottles. Poison cupboards, or poison bottles, he said, he would not deal with, as they would form the subject of a paper to be read by Mr. Taubman. Mr. Beynon showed a good design for gold labels for dispensing bottles, which were more easily read than the usual kind (see CHEMIST AND DRUGGIST for September). The desk at which the prescriptions were copied, he said, should be at the right hand corner of the counter, and unless the finishing-off was done at a separate place, the labels should be in drawers above. In the desk itself there might be some of the smaller sized wrapping papers. As to the position of the prescription while it was being dispensed, he thought it should be on a small desk (say 9in. square) by the side of the large one, and held down by a spring. The back of this little desk could be fitted with some open partitions for grain scales and weights, and also a few slip labels, as "Not to be Taken," &c. Mr. Beynon spoke of the great similarity between the smaller dispensing weights. Mr. Sands had told him of some weights of various shapes, round, triangular, square, six-sided, &c., according to the number of grains. He thought that these would prove a great boon to the dispenser. He described an excellent arrangement for keeping mortars; it consisted of a sort of turn-table situated under the counter, with shelves on which the mortars were placed. Glass measures should be put on the ledge formed by the top of the screen, and the knives and spatulas in a drawer. Corks and a cork-squeezer should be on the right hand of the dispenser. Three pill machines were required—namely, one five-grain, one three-grain, and one one-grain. He suggested that the bottom of the machine should project a little beyond the pill tray, and should have a hole in the centre of that projection through which a bolt could be put into a corresponding hole in the counter; by this method the shifting of the machine, when in use, would be prevented. A steel slab for drying extracts and pill masses was a very useful addition to the stock of dispensing utensils. As to the plaster drawer, Mr. Beynon said that that was frequently the most untidy place in the dispensary; but if it were divided into partitioned, each lined with tin, and capable of holding one half-pound roll of plaster, this would be avoided. A few small shapes for blisters and plasters frequently required, might also be kept ready. A gas jet for sealing wax should be at the right-hand corner of the counter, close to the desk. Mr. Beynon described a very good gas-stove with a retort-stand combined. He said, in conclusion, that a series of tables of strengths of Pharmacopœia solutions, strong tinctures, compound powders, &c., of the saturating powers of acids, and also of the solvents and solubilities of chemical substances, would prove very valuable for reference, and as a guide to the dispenser. The CHAIRMAN (Mr. Taubman) suggested that just below



the top of the screen and above the highest shelf, a space of an inch and a half should be allotted to drawers for post pill-boxes, silver leaf, pill-finishers, &c.

Mr. BEEDZLER described some blocks he had seen, which served the double purpose of holding the pill-machine tightly in its place, and of acting as a rest against which a mortar could be pressed when in use, to prevent it slipping. He thought that a greater distinction between the smaller weights was very desirable. As to the knives and spatulas, he thought they were better kept in racks than in a drawer.

Mr. WEAVER objected to having fixtures of any kind on the dispensing counter; they were frequently in the way. He thought that where much dispensing was done, the medicines should be finished off at a separate counter.

Mr. LEARMOUTH said that only the smaller sized bottles should be kept in drawers; the larger ones should be in lockers at the back of the dispenser.

Mr. BEYNON said that the blocks spoken of by Mr. Beedzler, would be inconvenient as *fixtures*; but if they were made moveable, would probably be very useful.

Mr. BELL said he had used some of the weights of peculiar shape, and found them very convenient.

A vote of thanks to Mr. Beynon and to the Chairman brought the meeting to a close.

#### THURSDAY, NOVEMBER 10.

Mr. DE PUTRON in the chair. Mr. WEAVER read a paper on "Some Hydrocarbons used in Pharmacy."

He introduced the subject by relating some of the chief facts connected with the chemistry of the important and numerous class of organic compounds known under the collective name of Hydrocarbons. Several substances, among which were creasote and carbolic acid, though they were not true hydrocarbons, were generally classed as such; and, indeed, were sufficiently analogous to justify their being so treated. Those two, together with oil of turpentine, oil of lemon, and one or two other volatile oils, would form the subject of his remarks. Mr. Weaver gave a full account of the manufacture of carbolic acid from coal tar oil by fractional distillation, and of its subsequent purification. He referred to the striking resemblance between carbolic acid and benzine in chemical composition; the former differing from the latter only in the possession of one atom of oxygen. He spoke of the great value of carbolic acid as a disinfectant, and of the deservedly high reputation it had gained as a therapeutic agent; especially in some throat affections. He then proceeded to notice creasote. This, which was one of the many products obtained from wood tar by distillation, was discovered by Reichenbach in 1830. The common source of it was tar obtained from beechwood in the process of making acetic acid. Mr. Weaver explained the method of its manufacture, and how it was purified by alternately dissolving it in solution of potash, and separating it by means of sulphuric acid, and finally distilling it with water. He also related its principal physical properties. The impurities sometimes met with in commercial creasote might be classed under two heads, namely, accidental and fraudulent. Among the former would be dark brown colouring matter and other constituents of wood tar; and among the latter, fixed and volatile oils, and carbolic acid. The glacial acetic test of the P. B. would show the presence of accidental impurities, as they would float on the top of the acid solution. The most frequent adulteration was carbolic acid. This might be detected by boiling the suspected fluid; as the boiling point of pure creasote was 397° Fahr., while that of carbolic acid was 370° Fahr.; or by treating it with collodion, which did not affect creasote, but with carbolic acid formed a jelly. Pure creasote was insoluble in solution of potash, and could not be solidified by a freezing mixture; the contrary was the case with carbolic acid. Speaking of the antiseptic properties of creasote, he said it well deserved its name, which was from the Greek, meaning, "I preserve flesh." Oleum Terebinthina was a good type of true hydrocarbons. When pure, its composition was  $C_{10}H_{16}$ . Mr. Weaver then noticed its general properties; mentioning the remarkable power that it, in common with some other hydrocarbons, possessed of forming artificial camphor with dry hydrochloric acid gas. After describing the two varieties, Russian and American, and remarking upon the difference

in their polarisation of light, as seen by the aid of the spectroscopo, he went on to notice oil of lemon and one or two other essential oils. He gave the physical and chemical properties of each, the adulterations to which they were liable, and the best means of detecting them. He showed the results of some tests he had applied to some commercial samples of carbolic acid, creasote, and oil of lemon.

Mr. TAUBMAN said that some of the samples sold in the market as creasote, were nothing but impure carbolic acid.

Mr. BEYNON observed that much of the German creasote was of very inferior quality.

A vote of thanks was given to Mr. Weaver and to the Chairman.

#### JAPANESE PROGRESS.

NEW JAPANESE MINT.—Following the example of Hong Kong, the Japanese are about to have a mint of their own. It will be recollected that some time since Hong Kong built a mint and fitted it up in first-class style at a cost of over £100,000; and, but for that most conservative power called "vested interests," there is very little doubt but that the Hong Kong mint would have been a successful undertaking. However, it was stopped, to the manifest loss of the whole community, from the Straits Settlements to Japan. The Japanese Government bought the machinery, and it was transferred to Osaka, and placed in a very handsome cut-stone building, expressly constructed for the purpose, where the operation of coining will commence in 1871. The new coinage is to consist of gold 10, 5, and 2½ dollar pieces; silver dollars, and 50, 20, and 5 cents.; and copper, 1 and ½ cents. and 1 mil—this latter being probably the smallest modern minted coin. The dies were from Japanese designs, and were sent out from England; but, owing to the "reverse" in each case not proving very effective, some alterations thought judicious have been introduced. On the obverse of the gold coins will be the Japanese dragon in the centre, tied in an inextricable knot, surrounded by the value and date in Japanese. The reverse has in the centre the arms of Japan—the round red "pellet"—above and below which are the flower badges of the Mikado. On either side of the arms are branches of the shrubs that bear the flower—emblems of Japan, and near the two "waveless" flags of the Mikado. The silver coinage is similar on the "obverse," but the "reverse" has the "pellet" in the centre, surrounded by rays towards the margin, in which the crests or badges of the Mikado appear with the wreaths before mentioned. The copper coins are similar to the above, with a smooth-skinned dragon instead of a scaly one. It will thus be seen that the fancy of the Japanese for dragons and flags without waves has been fully indulged; while, at the same time, the coinage will be handsome and striking, and far in advance of the Hong Kong mintage. With respect to the future working of the undertaking, the work before the officials is undoubtedly heavy, as a population of forty millions of people will have to be supplied; but the machinery is all of the best construction, and Captain T. W. Kinder is a man of considerable acumen, and has had some years' Eastern experience, having occupied a similar position at the Hong Kong mint. The melting department is furnished completely with the well-known manufactures of Morgan's "Patent Plumbago Crucible Company," Battersea. Some regret is felt that the building is so far inland, and on such a dangerous river as is Osaka; Hiogo or Yokohama, therefore, would have been much preferred as the site.—*The Times*, November 25, 1870.

The "Chemists' and Druggists' Almanack and Diary" is full of matter interesting and useful to everyone engaged in the trades named, or in any branch of the medical profession. The chemical tests for medicinal articles, noted in an able article, are especially worthy of attention; and the general information is compactly and cleverly arranged. We do not know of a better class publication of the sort.—*Standard*.

Chemists ordering parcels from their wholesale druggists or patent medicine houses this month should have a "Chemists' and Druggists' Almanack and Diary 1871," enclosed with it. On receipt of order and stamps to the amount we will send a copy to any London house. Messrs. Maw, Son, and Thompson, and Mr. Wm. Mather, keep them in stock.



## GAZETTE.

## BANKRUPTS.

BIDDEN, JOHN, Maxton House, Loats-road, Clapham late Angle-street, King and Queen-street, Wulworth, Isinglass manufacturer.  
CROOK, JOHN, Bank-road Chemical Works, Clayton, and Levenshulme, near Manchester, manufacturing chemist.

## PARTNERSHIPS DISSOLVED.

BUTLER and GOODRIDGE, Shepton Mallet, Somerset, manufacturers of annatto, Nov. 18; business continued by William Goodridge.  
KITSON and FRANCIS, 51, Broad-street, Worcester, chemists and druggists, Nov. 30; debts by Edward John Kitson, who continues the business.  
McMUNN and SOPER, Wolverhampton, surgeons, Dec. 1; debts by James McMunn, who continues the business.  
RENDALL and HEATH, 445, Strand, Mx., homoeopathic chemists, Sept. 1.  
SMITH and RICHARDS, 126, Newington-causeway, Surrey, chemists, Aug. 9; debts by William Ralph Richards.

## NOTICES OF FIRST GENERAL MEETINGS FOR ARRANGEMENTS OF COMPOSITIONS.

ADAMS, EDWIN, Market-square, Tunstall, chemist and druggist.  
BEALES, BENJAMIN DAWSON, 28, Osency-crescent, Licentiate of the Society of Apothecaries, London.  
BYERS, DECIMUS WILLIAMS, High-street, Market Harborough, chemist.  
COLLIER, WILLIAM, jun., Hereford-street, Sheffield, manufacturing chemist.  
COTTON, SIDNEY, Royd, Ludley, near Huddersfield, manufacturing chemist.  
CZNER, JAMES, Kingston-upon-Hull, surgical instrument maker.  
DUFF, ALEXANDER MARSHALL, 37, Gallowtree-gate, Leicester, surgeon-dentist.  
EASBY, CHRISTOPHER, Rockingham-street, Sheffield, truss manufacturer and commission agent.  
EDWARDS, RICHARD, Truro, chemist and druggist.  
ELL, SAMUEL, Duuster, chemist and grocer.  
FRASER, DONALD, 175, Ashted-row, Birmingham, chemist and druggist.  
FURNIVALL, WILLIAM, 6, Oxford-street, Weston-super-Mare, chemist and druggist.  
GILLAM, ISAAC JOHN, Crondall, surgeon and apothecary.  
HOYLE, GEORGE, Ratcliffe, Chorley, chemist, druggist, and drysalter.  
RICKETTS, JOHN, Wason's-buildings, Harrington-street, Liverpool, and Aughton, formerly chemical manufacturer.  
SIMONS, NATHANIEL WELLS, trading as SIMONS and Co., 45, Baldwin-street, Bristol, wholesale druggist.

## Provincial and Foreign Reports.

[We shall be glad to receive from all parts of the world items of interest to our readers. Correspondents who favour us with reports of local meetings, etc., will please to condense them as much as possible; and when local newspapers are sent, we shall be glad to have the passage intended for our notice, specially marked.]

## ASHTON-UNDER-LYNE.

## SECOND ANNUAL REPORT OF THE ASHTON AND DUKINFIELD CHEMISTS' ASSOCIATION.

THIS Association, having now attained the age of two years, may be considered to have passed through some of the dangers incident to a state of infancy.

The last had been a successful and creditable session. Seven monthly meetings were held with an average attendance of about ten members, which we may consider fair, but not at all what we should like to see. With a little effort at the convenient hour at which our meetings are held, we think every member of the trade might be found here. Let each try if he cannot induce some of these regularly absent to join us here, for sure we are that those who stay away deprive themselves, as well as us, of a decided benefit. Already a better and more united feeling has arisen as the result of this Association, and none of us have any cause to regret, but, on the contrary, to rejoice in the establishment of this monthly social gathering.

One special meeting was held last season, called purposely to consider the obnoxious propositions of the Pharmaceutical Council as to the sale and storing of poisons. A lengthened discussion and careful consideration was given to this subject, and, eventually, strong, vigorous, and well-digested resolutions were sent by this Association to the Pharmaceutical Council, and to the editors of the *Pharmaceutical Journal* and *CHEMIST AND DRUGGIST*, and we may congratulate ourselves on having taken some humble part in delaying these regulations, at any rate for twelve months, though, judging from recent discussions in the Pharmaceutical Council, our work in this direction is not yet completed. Whenever such attempts to lead us to a self-imposed slavery are

made by these placed in authority over us, may this Association ever be found ready and able to frustrate all such efforts, and modestly but firmly to point out "a more excellent way."

Twice during the last session the apprentices and assistants of the town met us round this table, which, no doubt to them, was a pleasure equal to our own. Such social intercourse between employers and the young men must result in a decided benefit to both, and we hope to see this feature renewed during this session.

Three able and profitable papers were contributed by members and read at our monthly meetings, one by our Vice-President, Mr. Bostock, on "Pharmaceutical Pioneers," another by our President, on "Longfellow's Poems," and the third by Mr. Avison, on "Progress." Instead of three may we have twice three such papers during our present session.

Perhaps the most popular work in which this Association was engaged, and which we hope to see repeated year by year, was the course of three able public lectures, one by our friend, Mr. Slugg, of Manchester, on "Spectrum Analysis," which was a real treat to all who heard it; another, on the "Elements of Chemistry," by our esteemed friend, Mr. J. Waterhouse, and the final one by Mr. Siebold, of Manchester, on "Poisons."

The two former of these lectures were rendered profitable to the Institution, the last one resulted in a small loss to our funds. It is hoped that at any future lectures this Association may organize, every member will do his utmost to render them successful, as they afford a rich treat to our young men, as well as to ourselves and the public generally.

Mr. W. H. Waterhouse was re-appointed President; Mr. W. Bostock, Vice; Mr. S. Neal, Treasurer; Mr. E. Fisher, Hon. Secretary.

## GLASGOW.

## GLASGOW CHEMISTS' AND DRUGGISTS' ASSOCIATION.

THE first general meeting of the session was held on Thursday evening, 17th November last, in the lecture hall of the Mechanics' Institution, Bath-street. The newly-elected President, Mr. Davison, in the chair. There was a large attendance, many strangers being present. After the reading of the minutes of previous meeting, which were approved, several new members were elected. The Treasurer announced the receipt of the annual donation of 10s. from Dr. A. M. Robertson, and also a donation of three guineas from the Glasgow Apothecaries' Company, and that of one guinea from James Tayler, Esq., wholesale druggist, towards the funds of the Association. Votes of thanks having been awarded the donors, the President briefly introduced Roger Kennedy, Esq., Professor of Botany, Andersonian University, who delivered a highly interesting and instructive lecture, entitled "The Histology of Plants." The lecture, which treated principally of cell-growth in the structure of plants, was most exhaustive, and frequently elicited applause, whilst the illustrations given by drawings, etc., of the plants in their various stages of growth, rendered it all the more appreciable. At the conclusion Mr. Kennedy was awarded a hearty vote of thanks, in reply to which he stated that his next lecture would be a continuance of that given on this occasion. The meeting then broke up. At a special meeting held on the 23rd of November, the report of the sub-committee appointed at a previous meeting to look out for a more suitable place of meeting, was given in, which recommended that the offer made by the managers of Anderson's University be accepted. On the motion of Mr. Kermanth, the recommendation was unanimously agreed upon. Mr. Kermanth then gave notice that at the next general meeting he would bring forward a motion to the effect that a price-list be compiled for prescriptions, that it be issued by the Association, and that all efforts be made to get the members of the profession to abide by it. The Secretary then stated that the rules, etc., of the Association were now supposed to be out of date; and, as he looked upon our removal to the Andersonian as a fitting opportunity for remodelling our constitution, he would at the next meeting bring forward a new code for the approval of the members. The meeting, which was most harmonious, then separated.



## HULL.

## HULL CHEMISTS' ASSOCIATION.

ON Wednesday evening, December 7th, the annual supper of the Hull Chemists' Association was held when about thirty-five members attended. After supper, the chair was occupied by Mr. E. Baynes, and the vice-chair by Mr. Anthony Smith. The proceedings commenced by drinking the usual loyal toasts; after which "The Mayor and Corporation" was proposed from the chair, and duly honoured.—Councillor Gibson, in replying to the toast, assured the meeting that every one in the Council did their best for the town. It was not always the best talkers who did the best for the town. He might almost take the converse and say, it was the non-talkers. The present Mayor was a gentleman who was fulfilling the office at a sacrifice to his business.—Mr. E. Wallis next proposed "The Town and Trade of Hull," and in doing so especially alluded to the progress of the chemists and druggists.—The toast having been drunk, Mr. G. Wokes replied, expressing a hope that the town would never lose its position as the third port of the kingdom, except to take the second position.—Mr. Preston proposed "Success to the Chemists' and Druggists' Association," observing that the members of the Association numbered more this year than in the preceding year.—The Chairman, in replying, stated that the Society had made material progress during the past fifteen months, and he hoped it would be an enduring and lasting Association.—Mr. Dobson submitted "The Health of the Vice-President" (Mr. A. Smith), which was heartily drunk and suitably responded to.—The Chairman proposed "The Health of Secretary and Treasurer," (Mr. C. B. Bell) and in doing so said that gentleman had spared neither time nor expense, and had used his untiring efforts and energies on behalf of the Society. He had acted thus as secretary, and as treasurer had carefully husbanded their funds. It had been felt that such valuable services ought to be acknowledged in some tangible and sterling shape, and on behalf of a large number of subscribers he had to beg Mr. Bell's acceptance of a silver cup and salver. The latter article bore the following inscription—"Presented to Mr. C. B. Bell by the members of the Hull Chemists' Association, as a mark of their esteem, and in recognition of his valuable services as their honorary secretary."—The Vice-Chairman, in supplementing the Chairman's remarks, said the presentation was made by almost the whole Association to a gentleman who had done his best to raise the status of the trade without any consideration on his part of time and labour.—Mr. C. B. Bell, in accepting the presentation and acknowledging the toast, said whatever he had done was with the sole desire of furthering the interests of the trade, and he hoped the chemists and druggists would prosper still more.—Mr. Anderson proposed "The Committee," to which Mr. Staning replied.—"The Medical Profession," given by Mr. G. Myers, was replied to by Mr. Rudd.—Mr. Bell submitted "The Health of the Pharmaceutical Society," to which Mr. Francis Earle (the local secretary) replied.—The remaining toasts submitted to the meeting were "The Lecturers" (Messrs. Rudd and Niven), "The Visitors," "The Press," and "The Ladies."

## LIVERPOOL.

## LIVERPOOL CHEMISTS' ASSOCIATION.

THE second general meeting of this Association was held at the Royal Institution, on the 10th November; the President, Mr. JOHN ABRAHAM, in the chair. There was a large attendance.

The minutes of the previous meeting were read and confirmed.

Letters were read from Messrs. Attfield, Stoddart, and Hills, acknowledging their election as honorary members.

Mr. Joseph Hallawell, Mr. Charles C. Bell, and Mr. Thomas Williams were elected members.

Mr. William Hallawell, Mr. Edward Olivant, and G. Harri- man, were elected associates.

THE PRESIDENT exhibited a bottle, labelled "Palatable Cod-Liver Oil," a mixture said to consist of 9 parts of cod-liver oil and 7 parts of syrup, flavoured with lemon and

oil of aniseed or dill. The President and members generally, seemed to disapprove of the article, and especially of the testimonials attached to it, some of which were signed by gentlemen with the title of F.C.S.

THE SECRETARY exhibited a sample of chiretta, falsely packed with munjeet (*Rubia cordifolia*), presented to the museum by Messrs. Evans, Sons and Co., a description of which appears in the CHEMIST AND DRUGGIST, November, 1870, page 336.

MR. RICHARD EVANS called attention to the correspondence which appeared lately in the *Pharmaceutical Journal* respecting poisonous feeding-bottles, and stated that six years ago, one of his children died, and upon application to the medical man who attended the child for a certificate of death, it was refused, the child exhibiting strong symptoms of having been poisoned, symptoms which, he considered, were produced from the use of an ordinary feeding-bottle, the white tubing, not being india-rubber, but a composition (consisting of india-rubber dissolved in 10 per cent. of bisulphide of carbon, and thickened up with white-lead, resin, and sometimes oxysulphuret of antimony, to give it a pink colour), from which, when coming in contact with the milk, sulphuretted hydrogen was evolved, and lactate of lead formed in the stomach. He exhibited a feeding-bottle, the advantage of which was that the tubing and teat being formed of native rubber, vulcanized by means of magnesia, none of the evils mentioned in the other case, could possibly occur. He stated that Dr. Nevins, the lecturer at the Royal Infirmary School of Medicine, had recommended the students when they met with cases of vomiting, griping, and diarrhoea in infants, to ascertain how they were fed, and if the white tubing was used to treat the patient for lead poisoning.

MR. A. NORMAN TATE, analytical chemist, stated that at the request of a medical gentleman, he had analysed some samples of tubing, and found lead in each.

MR. DAVIES had tested several samples with the same result, and testified the value of Mr. Evans's suggestion from practical experience.

MR. EDWARD DAVIES, F.C.S., read a paper upon

## "OZONE,"

of which the following is an abstract:—

When the electrical machine was invented, it was soon noticed that a peculiar odour was produced during the working of the machine. Von Marum, about a century ago, found that on passing sparks through oxygen it assumed the same smell and attacked mercury.

In this state our knowledge of ozone remained until Schönbein published his first paper on ozone in 1840, showing its production in the electrolysis of water, and afterwards in the slow oxidation of phosphorus.

Ozone can be prepared in many ways. 1st. Clean phosphorus is put into a bottle with a little water for an hour or two, then removed, and the enclosed air well washed to remove phosphoric acid. 2nd. A hot glass rod is held in a vessel containing ether vapour and air. When the rod is sufficiently heated, in the dark a pale blue laubent flame, resembling that emitted by phosphorus, is seen. If oxygen be employed instead of air, and a heated glass tube used, an explosion ensues. 3rd. By the electrolysis of water strongly acidulated; according to M. G. Plante, more ozone is obtained by using lead electrodes. 4th. By electrical discharges in air or oxygen. This method yields the largest quantity of ozone. By passing dry oxygen through Leman's ozone generator (which is essentially a Leyden jar, the two coatings of which are connected with the terminals of an induction coil) a stream of strongly ozonized oxygen may be obtained. 5th. By the action of strong sulphuric acid on permanganate of potassium. It is also said to be produced during chemical combinations, as that of sulphuric acid with potash, in fermentation and putrefaction, and by plants when in flower.

The tests used to indicate its presence are:—1st. Paper brushed over with starch-paste containing iodide of potassium, the ozone oxidizes the potassium, and the free iodine unites with the starch. 2nd. Red litmus moistened with solution of iodide of potassium. The potash set free turns the paper blue. 3rd. Paper moistened with solution of sulphate of manganese. The paper turns brown from formation of dioxide of manganese. 4th. Paper moistened with oxide of



thallium, which turns brown owing to formation of peroxide of thallium.

Ozone tarnishes silver foil and mercury, corrodes cork and india-rubber, oxidizes indigo into isatin, ferrocyanide of potassium into ferricyanide, and destroys bad smells. Peroxide of manganese and peroxide of lead convert it into ordinary oxygen without undergoing change themselves; peroxides of hydrogen and barium also convert it into ordinary oxygen, and are decomposed into oxygen and protoxides.

Ozone possesses a powerful odour, from which it derives its name *ὄζειν*, signifying to have a smell. It is almost insoluble in water.

Oxygen in the free state is combined with itself to form a molecule, which may be represented as  $\oplus\ominus$ . The view of ozone generally received is that it is  $\ominus\oplus\ominus$  condensed into two volumes. This view is supported by the fact that when put in contact with iodide of potassium it does not contract. If this be so, when ozone is produced by electrical action, either both atoms of ordinary oxygen must become negative and unite with ordinary oxygen, or the molecule must split into positive and negative oxygen, and a molecule of antozone  $\oplus\ominus\oplus$  be also formed. Antozone has, however, not been satisfactorily isolated, unless the fumes produced in contact with water when ozonized oxygen is passed through iodide of potassium solution consist of antozone mechanically mixed with aqueous vapour (Meissner). Williamson and Baumert considered ozone to be  $\text{H}_2\text{O}_2$ ; but this view seems disproved by the experiments of Andrews.

Ozone is found generally in the air. Dr. Richardson says that the amount may be  $\frac{1}{10000}$ . It is absent generally in large towns, especially in close courts. It is doubtful if it produces disease, though catarrh may be the result of excess, as it produces the symptoms of that disease when inhaled. Equally uncertain is the action which it exerts in preventing disease. According to some observers the occurrence of cholera is coincident with absence or diminution of ozone, and its departure with a return of ozone. Against this view must be set the observations of Father Denza, that in Turin, during cholera, the amount of ozone remained an average quantity, and of M. Fournet, that at Lyons, where no ozone can ever be detected, cholera is not more frequent or severe than elsewhere.

Many of the discrepancies observed may be due to the method used for measuring the amount of ozone. This, consisting in the use of iodide of potassium and starch papers, is liable to many sources of error. Many other substances will set iodine free, besides ozone, and the tendency of free potash to convert free iodine into an iodate of potassium, must have some influence on the delicacy of the test. Until some more certain means is discovered, present observations must be received with great caution, or the knowledge which we possess will be worse than ignorance, as being calculated to mislead.

The methods for preparing ozone, and the various tests for it mentioned by Mr. Davies, were fully and ably illustrated by many very successful experiments.

The PRESIDENT said that at the *soirée* of the Pharmaceutical Society an apparatus was exhibited for producing ozone in large quantities.

A discussion followed, in which Messrs. Tate, Wright, Blair, and Samuel took part.

Mr. A. NORMAN TATE said he was very glad to hear Mr. Davies close his valuable paper as he did. He had always avoided ozone, as he considered the knowledge that chemists had of it was worse than ignorance, as ozone was often said to be present when other things might exist. He complimented Mr. Davies on his concentration of the subject, and moved a vote of thanks.

Mr. BLAIR, in seconding the vote, said that when ozone was absent cloth goods would not dye, and instanced the remarkable effect of a thunder-storm, during which the power of the mordant was increased, and the stuff was dyed. In the island of Skye, ozone was very abundant, and the people never suffer from catarrh. He considered also that if ozone could be produced in quantity at a reasonable rate, it would be of great service to decolorize sugar.

The vote having been carried by acclamation, Mr. DAVIES returned thanks, and the members adjourned.

The third general meeting was held November 24th; the President, Mr. JOHN ABRAHAM, in the chair.

Mr. James Agnew and Mr. W. T. Warhurst were elected members.

Mr. E. DAVIES, F.C.S., exhibited a bulb filled with a mixture of chlorine and hydrogen. On being exposed to the action of magnesium light, the two gases combined to form hydrochloric acid gas, with a loud explosion.

Mr. ALFRED E. TANNER read a paper upon "Sp. Æther Nit. B.P."

The object of the author being to gain information, he detailed fully his own observations in the process of manufacture, as ordered in the Pharmacopœia, and stated that he had never succeeded in collecting the amount of distillate there ordered, 11 oz, being the most he could obtain without the addition of more nitric acid or increased temperature.

He considered that there was too little nitric acid used in the first part of the process, if the quantity was increased proportionately, and the distillate tested as to the amount of  $\text{C}_2\text{H}_5\text{NO}_2$  it contained, and, if found to contain 50 per cent., one volume mixed with four volumes of rectified spirits of wine would furnish Spts. Æther Nitrosi of Pharmacopœia strength.

Speaking of the impossibility to keep Spts. Æther Nit. B.P., owing to the nitrous æther (even when pure) becoming in a few days strongly acid, he suggested a 5 per cent. solution, or the introduction of some other substance which would exercise a preservative influence, by preventing decomposition; he thought experiments on this matter well worthy of attention.

In concluding, Mr. Tanner strongly condemned the use of a concentrated solution which most wholesale houses were supplying under the name of Solutio Ætheris Nitrosi, 1 to 7. He considered it was impossible to produce such a compound; and, knowing that it should contain 80 per cent. of  $\text{C}_2\text{H}_5\text{NO}_2$  if it was what it was represented to be, he tested a sample of it, but found it very far short of what it represented. He had great suspicions of many concentrated solutions, so called, and thought if they could all be analysed with the same facilities as this one, many would be found deficient.

Mr. HILDITCH said that by mixing the 11 oz. which first distilled over (and which, as Mr. Tanner had said, contained 50 per cent. of nitrous æther) with 44 oz. of rectified spirit, a solution was obtained which contained 10 per cent. of nitrous æther, and which was much sweeter than when the 15 oz. were distilled over and mixed with 40 oz. of spirit, he having always found that the latter part of the distillate had a very disagreeable smell.

Mr. ROWLAND stated that in manufacturing Sp. Æther Nit. B.P., in large quantities, he generally produced from 65 to 75 of the given distillate at the given temperature; but, by an increase of temperature at this point, he drew over the required quantity. He could not understand why a concentrated solution could not be made.

The PRESIDENT said that he had always succeeded in producing the required quantity at the first distillate, and thought the Pharmacopœia process a very satisfactory one. The only modification he could suggest would be that the acid should be added in even more than two parts. He stated that it was the opinion of Mr. Hanbury that Sp. Æther Nitrosi, B.P., was an acid preparation from the very first. He (the President) thought that the instructions given in the Pharmacopœia were so simple, that every chemist should manufacture his own, and saw no necessity for a concentrated solution.

A discussion followed, in which several members took part.

Mr. CHARLES SHARP brought before the notice of the meeting a report recently made by Dr. Chandler, Chemist to the Board of Health of New York, on the presence of lead in a large number of hair restoratives, enamels, skin powders, &c. The report referred to an inquiry which arose out of some cases of lead palsy occurring in the practice of a medical man in New York, which were traced to the use of a cosmetic known as "Laird's Bloom of Youth." Dr. Chandler found that the preparations he examined contained acetate and carbonate of lead, corrosive sublimate, and bismuth in variable quantities. In all the hair restoratives lead was present. The skin powders were comparatively harmless. The enamels, however, were of a very deleterious character.



(A report of this inquiry was published in the CHEMIST AND DRUGGIST, September, 1870, page 272.)

Mr. BLAIR stated that a mixture of hydrochlorides of aniline and copper formed a very successful hair dye. It was largely used by workmen employed in manufacture of anilines, and it was found impossible to prevent their using it; in fact, when aldehyde green was discovered, they were so infatuated with it, that they died their hair green. He thought that a solution of Hoffmann's violet (which is perfectly neutral, and soluble in glycerine) would form a good mixture for dyeing the hair black.

In reply to the President, Mr. Blair said this mixture would stain the skin.

A discussion followed, in which the President, Messrs. Tanner, Sharp, Blair, and Thos. F. Abraham took part.

The SECRETARY moved a vote of thanks to the contributors of papers, which was carried unanimously.

The PRESIDENT announced that it was proposed to hold a *conferenza* in January, 1871, and that Professor Roscoe had signified his willingness to attend to give a lecture.

The announcement was received with acclamation by the members present, and the meeting adjourned.

VISITORS to the British Pharmaceutical Conference at Liverpool in September, and especially exhibitors, will remember with gratitude the exertions of Mr. A. H. Mason, which so much contributed to the success of the exhibition. We are glad to extract the following paragraph from one of the local papers:—"At a meeting of the Liverpool Chemists' Association (November 10th), the Chairman (Mr. John Abraham) stated that the local committee had decided to mark their appreciation of the services of Mr. Alfred H. Mason, the Secretary of the Chemists' Association, in connection with the arrangements for the exhibition held during the recent meeting of the British Pharmaceutical Conference in this town. They accordingly asked his acceptance of two handsomely-bound volumes—Miss Meteyard's 'Life of Wedgwood,' and Longfellow's 'Hyperion,' which the Chairman then presented to Mr. Mason, who, in reply, expressed his thanks."

## MANCHESTER.

### MANCHESTER CHEMISTS' AND DRUGGISTS' ASSOCIATION.

AN ordinary monthly meeting was held on Friday, December 2nd, Mr. W. S. Brown, President, in the chair. Messrs. Tyson, Lane, Booth, Mercer, Diekenson, Clark, and Carruthers were elected Associates.

A paper on "Heat" was read by Mr. J. T. Slugg, F.R.A.S., of which the following is an abstract:—

Heat is necessary to the life of both animals and vegetables. Everything around us exists in either a solid, liquid or gaseous state, its condition depending on the degree of heat to which it is subjected. If all substances were in their solid state, they would be so many individual creations having no action or influence on each other. Their only action would be obedience to the law of gravitation. In such a state the globe would cohere and revolve in vain; there could be no life, no change, but the whole would remain in the fixed and dismal sterility of perpetual death. One of the most striking instances of the action of heat, is that of subjecting a mixture of sea-sand and soda to it; the beautiful compound known as glass is produced, whereas without it, however intimately they are mixed they remain useless and opaque substances. Whilst heat is necessary for the preservation of life, the abstraction of heat tends to preserve dead animal matter from putrefaction. A remarkable instance of an antediluvian elephant, which had been discovered and had been embodied in ice for thousands of years, and yet in a perfect state of preservation, was adduced. In many respects there is a striking analogy between the action of light and heat, which were given. Formerly, light was considered to consist of particles thrown off by luminous bodies. The corpuscular theory is now abandoned in favour of that known as the undulatory. It is a remarkable fact that the opinion of scientific men is now undergoing, if it has not undergone, a similar change. The belief is, that heat is not a kind of matter scattered by heated bodies, but that it

is a motion of the molecules of matter. After noticing the conduction, radiation, polarization, &c. of heat, reference was made to the different degrees of heat as affecting different substances, as to their melting, boiling, and freezing points. The highest degree of heat ever measured is 32277° F., 152 times that of boiling water. That of a common fire is 790° F.; that of a flint-glass furnace 15890°; the average temperature of the human body is 90°; whilst the present medium temperature of the globe is 50° F. The conversion of a liquid into vapour is always accompanied by enormous absorption of heat. The effect of perspiration is to keep the body at a healthy temperature. The law of expansion and contraction as the results of heat and cold is strikingly illustrated by the index affixed at each end of the tubular bridge over Menai Straits; as also by the fact that the iron rails of the London and North Western line from Manchester to London were 500 feet longer in summer than winter. The remarkable exception to this law in the case of ice was noticed in its results as to the preservation of life. Bismuth also presents an exception. Coming to the principal topic of the paper, a view was taken of the various forces at that moment at work in the world, mechanical and muscular, and it was shewn that all these energies owe their existence to the sun—that all are derived from him. Referring to the quantity of heat emanating constantly from the sun, the quantity of his light which falls upon this earth was also incidentally alluded to, and several curious calculations mentioned as illustrating the subject: for instance, to produce a light upon any part of the earth's surface equal to ordinary sun-light, it would require 3,500 quadrillions of wax candles placed at the distance of the sun. After further illustrations of the amount of heat emanated, the dynamic theory of heat was explained, both as to terrestrial energies, and the supply of the sun's expenditure by the raining of meteoric matter on his surface.

A hearty vote of thanks was passed to Mr. Slugg for his interesting lecture.

## Trade Memoranda.

THE directors of the North-Eastern Railway are prepared to receive tenders for the supply of white and red lead. To be marked "Tenders for Stores," and addressed to the Stores, Gateshead, not later than the 29th inst.

Messrs. S. Monk and Co. have sent us samples of some new cough drops, which, we should judge, are very good, but which are flavoured too strongly with aniseed. Their medicinal lozenges, of which we also have samples, are very satisfactory.

From Messrs. E. W. Howe and Co. we have samples of carbolic acids. At this moment we have no means of judging of the superiority or inferiority of these as compared with other makers, and must therefore decline to pass an opinion. We can only say that they look very handsome.

At the Cattle Show last week, the piggeries and cattle sheds were disinfected and kept fresh by the use of Calvert's carbolic acid. Freeman Brothers made a prominent display of their annatto preparations—a very sensible thing to do among such a company.

Messrs. R. H. Millard and Sons have sent us a packet of invisible wool for the ear, which we think very good. The colour so nearly resembles the flesh that it may be worn without observation.

Messrs. Whittle and Co., of 63, Great Tower-street, London, supply, through chemists, the celebrated tonic waters of Harrogate, aerated. They are sold in the usual soda-water bottles.





## MR. WILLIAM SAUNDERS "AT HOME."

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

DEAR SIR,—In reply to your editorial query, "Who is Mr. William Saunders when he is at home?" permit me to remind you of the existence of a flourishing city of the same name as our own in the far west of the Dominion of Canada, and in that city our friend may be found at home.

Mr. Saunders enjoys a high and well-merited reputation as a scientific pharmacist throughout the Dominion of Canada.—Your obedient servant,  
London, Nov. 16, 1870.

H. SUGDEN EVANS.

## HOW TO PUT PILLS IN A BOX.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—Mr. Barnard S. Proctor, who writes in your paper last month on the use of a pill-scoop, is no doubt a most accomplished pharmacist, and knows how to make pills as well as any man living, probably. But I must beg his pardon for saying that he does not quite know how to put them in a box when they are made. Tilting the machine and picking up the pills one by one, are plans worthy only of those apprentices whose fingers are notoriously all thumbs. I have made pills morn, noon, and night for a good many years, and very seldom indeed do I drop one on the floor. After dividing them I bring them on to the slab of the machine, and if they are of decent consistence I give them the finishing touch, then with a little twist of the hand I transfer them all at once into the palm of my left hand and thence into the box, in very little more than "no time." In this I never dreamed that I was doing anything clever until I read Mr. Proctor's letter.

London, Dec. 7th.

PILL-BUILDER.

## "A WARNING."

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—I have been taken in to the large amount of 1s. 2d.! I write to warn my brethren in London and suburbs against the same paltry imposition. A man came into my shop, and, presenting a bill of "De Conder's Pills" to cure everything, inquired if I kept them in stock, and being told that I did not, but could procure them, requested me to do so, and stated that he would call for them next evening. I obtained the pills, but need hardly add, that the man has not yet made his appearance.

I should not have troubled you in this small matter, but I found that three druggists in this neighbourhood had received similar visits from the same man, and, I have no doubt, many others as well. Publishing this may deter the gentleman from imposing on others, and may lead them to request payment before they obtain them. I should advise that he should be charged at least 1s. 2d., as they cost that.

I am, Sir, yours respectfully,

S. D.

Bow, E., Dec. 10, 1870.



CHEMISTS' AND DRUGGISTS' ALMANACK, 1870.

An anonymous writer, styling himself "Personne," questions (*Chemist and Druggist*, p. 346) two definitions offered by one who invariably signs or acknowledges his communications. I undertook to describe the new Austrian Pharmacopœia in the "Chemists' and Druggists' Almanack" last year, and made this very trivial but true remark, "Sparadrap. Emp. Adhesiv. Spread."

The term is Continental, not Austrian. This is as the case stands. I did not further state that it was also English, because I had said not only that it corresponded to empl. adhesivum, but that it was that plaster *spread*. By English practitioners of a certain age, and still more in domestic life, the word is familiarly used now.

"Rob" is the next note of warning. The definition, part of which I copied, not gave (being under the impression that the Austrians were acquainted [with their own pharmacy] was this:—

"Roob Juniperi and Roob Sambuci need not be mentioned, save to explain our English word Rob. This means the expressed, strained juice of a fruit evaporated to the consistency of an extract. I subjoin the sentence as printed at Vienna, for the benefit of students.

ROOB SAMBUCCI.—℞. Fructuum Sambuci recentium, q.v. calcfac agitando usque ad ebullitionem; denide liquorem per setaceum transmittit et residuum sacculis linteis inclusum opo preli exprime. Suceum expressum et colatum coque ad extracti spissi consistentiam, tunc adde novenis partibus succi inspissati sacchari partem unam et leni igne sub continuâ agitatione evapora ad roob consistentiam."

Whereupon "Personne," never having read the Latin, says that my explanation "was slightly mistaken in asserting that it means the expressed, strained juice of a fruit evaporated to the consistency of an extract; thereby implying that sugar forms no part of a Rob." The word means exactly what was said. Austrians add sugar—the French generally do not. In England, when made at all, sugar is generally used. Gray also mentions honey. Had I included every kind of Rob, I should have confused the reader without throwing more light on Austrian pharmacy.

Gray's *Supplement* is not an "old-fashioned book." Mr. Richard Reynolds, thinking it too well known, passed it over in his contribution to the *Century of Old Books*, and noticed instead a less celebrated work, "The Elements of Pharmacy and of the Chemical History of the Materia Medica."

*Pharmacopœia Extemporanea*, to which "Personne" alludes, has been well described by Mr. Haselden—the edition, that is, of 1714, not 1740. Bouchardat is an excellent manual, but not unknown.

JOSEPH INCE.

THE DAKIN FAMILY MOTTO.—The *City Press* says, the motto on the crest of the Lord Mayor is, "Strike, Dakin, strike; the devil's in the hemp." The following explanation is given in M. A. Denham's "Slogans of the North of England," 4to, 1851, p. 14:—"The strangest of all northern mottoes—'Stryke, Dakeyn, the Devil's in the hemp!'—is, I believe, first found in the grant of new arms by Flower, in 1563, to Arthur Dakyns, Esq., of Linton and Hackness, in Holderness. . . . Arthur Dakyns was a general in the army, but, as two or three centuries ago generals commanded on sea as well as land, I imagine that he had distinguished himself in some gallant fight, perhaps against the Spaniards, wherein all the turning point of victory consisted in cutting some portion of a ship's hempen sails or cordage. It often happens that mottoes are dispersed among branches to whose history they are wholly inapplicable. The elder Dakeynes of Derbyshire, enchanted with the exploit of cutting the devil out of the hemp, assumed the odd motto in question at the very commencement of the seventeenth century, and confirmed to them in 1611 by St. George. The crest always consorted with the motto. Out of a naval coronet springs an arm brandishing a hatchet, and prepared to strike."

LUTHER E. SALE, in the *Chicago Pharmacist*, gives the following formula for cucumber ointment:—

Take of Oil of sweet almonds, seven fluid ounces.  
Spermaceti, eighteen drachms.  
White wax, five drachms.  
Glycerin, one fluid ounce.  
Green cucumbers, lbs. iv.

Cut the cucumbers in small pieces, mash them in a wedge-shaped mortar, let them macerate in their own liquor for twelve hours, express and strain; melt the almond oil, spermaceti and wax together, by means of a water bath; add to it the strained liquor, stirring constantly so as to incorporate the whole together. Set aside in a cool place (an ice chest preferred), till it becomes hard, then beat with



a wooden spoon, so as to separate the watery portion of the cucumbers from the ointment, pour off the liquor thus obtained, and mix the glycerin with the ointment without the aid of heat, by working it with the hands until it becomes thoroughly incorporated. Put up in four ounce jars, cover with a layer of rose water, and set aside in a cool place. The ointment prepared in this way will keep sweet and nice for twelve months. It is much esteemed by physicians and the public generally in the south and south-west.

We have been subjected to the following examination by "A Student." As some of the queries have general interest, we print them entire, as well as the replies.

Q.—How is the reaction symbolized which occurs in the production of potassium chromate?

A.—Potassium chromate may be readily prepared by adding potassium carbonate to a hot solution of potassium bichromate, thus:—



Q.—How is the reaction symbolized which occurs in the preparation of liq. bismuthi et ammoniæ citratis?

A.—The constitution of the products of this operation has not been determined with sufficient accuracy to admit of the reaction being represented symbolically.

A.—How can aqua camphoræ concent. be made for preparing the officinal water extemporaneously?

A.—Camphor is only slightly soluble in water (40 grains to the gallon), but it may be suspended in water in large quantity by means of mucilage, sugar, yolk of egg, carbonic acid, myrrh, etc.

Q.—For what purpose is potassium carbonate added to unguentum potassii iodidi, B.P.

A.—Owing to partial decomposition of the potassium iodide, the ointment becomes yellow; this is prevented to a great extent by the addition of potassium carbonate.

*Doubtful.*—It is provided by section 39 of the Bankruptcy Act, 1869, that "where there have been mutual credits, mutual debts, or other mutual dealings between the bankrupt and any other person, an account shall be taken of what is due from the one party to the other in respect of such mutual dealings, and the sum due from the one party shall be set off against any sum due from the other party, and the balance of such account, and no more, shall be claimed or paid on either side respectively;" but a person will not be entitled under this section to claim the benefit of any set off against the property of the bankrupt in any case where he had, at the time of giving credit to the bankrupt, notice of an act of bankruptcy committed by such bankrupt, and available for adjudication.

Somebody writing in the *Pharmaceutical Journal* of last week wishes to know what is gum cowrie. Gum cowrie (or kowrie, which is the correct way of spelling the word) is a remarkable varnish-gum, which is imported in large quantities to this country from New Zealand. It is found there in the sand and is the remains—it is hardly right to call it a fossil—of pine forests. Its market price ranges from 10s. to £5 and £6 per cwt.

*Chemicus* (Liverpool).—We have not seen the book you refer to, and therefore presume that it has not yet been published.

*Ignoramus* (Penzance).—We believe the quantity of hydrochloric acid ordered in the B.P. is sufficient to dissolve the strychnine in liquor strychnicæ. We have not heard of any difficulty before.

W. F. H. wishes to know if any chemist has used chromic acid for warts, and if so, in what manner and with what results?

Mr. Winterbottom (of Oldham) has written us a long and able letter, commenting on some remarks made at a meeting of the Liverpool Chemists' Association respecting Fox's Palatable Cod-liver Oil. The president and members on that occasion were reported to have been unanimous in condemning the article, inasmuch as it was not cod-liver oil pure and simple. We confess that we fully agree with our correspondent in thinking that the Liverpool Association was rather too hasty in condemning an article which really possesses some value. We have seen the Palatable Oil several times, and certainly have never yet been deceived into the belief that the bottle contained cod-liver oil only. Neither by words, circulars, or labels are we aware that

Messrs. Fox and Co. have in any way misrepresented their article.

Mr. E. B. Smith (43, King-street, South Shields) wishes for the numbers of the *Chemist and Druggist* for August, 1868, and February, 1869, which are out of print here. Full price will be given. Any subscriber who will supply these will please write to Mr. Smith.

A correspondent informs us of a prescription which had come before him containing tinct. ferri mur., potass. bicarb., and chloral hydrate. A very scientific chemist might ascertain what the result of this mixture would be, but it would puzzle a Philadelphia lawyer to get at the intentions of the "qualified dispenser" who prescribed it.

W. T. Frost (Lee-green).—The British Seaweed Company, 94, West Regent-street, Glasgow. We believe iodine is made almost exclusively in Scotland.



[The following list has been compiled expressly for the CHEMIST AND DRUGGIST, by L. de Fontainemorceau, Patent Agent, 4, South-street, Finsbury, London; 10, Rue de la Fidélité, Paris; and 33, Rue des Minimes, Brussels.]

Provisional Protection for six months has been granted for the following:—

2553. G. E. Marchisio, of Baker Street, and E. Stevens, of St. John's Wood. Improvements in making, refining, and purifying an isolating oil applicable to the manufacture of paints and varnishes. Dated 23rd September, 1870.
2642. A. V. Newton, of London. Improvements in the working of galvanic batteries. Dated 5th October, 1870.
2676. J. Lawson, of Wavertree, near Liverpool. Improved preparations of food for horses, oxen, sheep, and pigs. Dated 10th Oct., 1870.
2679. N. Domaille and P. Collas, of Guernsey. Improvements in stoppers for bottles and in the means of securing stoppers in bottles. Dated 10th October, 1870.
2701. J. B. Philips, of Kingsland Road. Improvements in apparatus for securing corks and stoppers in bottles. Dated 13th Oct., 1870.
2715. R. H. Davis, of Widnes, Lancaster. Improvements in packages or receptacles for sulphuric acid. Dated 14th October, 1870.
2728. G. Batty, of Finsbury. Improvements in the preparation of concentrated food. Dated 17th October, 1870.
2751. W. E. Gedge, of London. An improved apparatus, combining the functions of a bung and of a self-acting vent-peg. Dated 19th October, 1870.
2762. W. R. Lake, of London. Improvements in the manufacture of oil and other products of petroleum. Dated 20th October, 1870.
2804. C. and T. C. Watts, both of Leadenhall Street. Improvements in the treatment of resinous gums employed in the manufacture of varnishes. Dated 25th October, 1870.
2823. P. Spence, of Manchester. Improvements in the manufacture of sulphuric acid, and in apparatus connected therewith. Dated 27th October, 1870.
2864. J. B. Spence, of Manchester. Improvements in the preparation of manures from tribasic phosphates. Dated 31st October, 1870.
2866. J. H. Johnson, of London. Improvements in the manufacture of acids and alkaline salts. Dated 31st October, 1870.
2875. A. C. and J. Sterry, both of Rotherhithe New Road. Improvements in purifying hydrocarbon and rosin oils. Dated 1st Nov., 1870.
2891. R. Reece, of Llandilo, Carmarthen. Improvements in apparatus for cooling and refrigerating liquids, manufacturing ice, and obtaining ammoniacal solution for the same and other purposes. Dated 2nd Nov., 1870.
2892. U. K. Mayo, of Massachusetts, U.S. of America. A new and useful improvement in dentistry or in the preparation of artificial teeth, and in the manufacture of mouthplates or supports therefor. Dated 2nd Nov., 1870.
2934. A. M. Clark, of London. An improved machine for cutting and printing lozenges and crackers. Dated 7th November, 1870.
2969. E. Herring, of Beer-lane. Improvements in the manufacture of alkaliized isinglass, sulphited and bisulphited. Dated 11th November, 1870.
2975. A. F. de Hemptinne, of Brussels. Improvements in the construction of apparatus for concentrating sulphuric acid. Dated 12th November, 1870.

Letters patent have been issued for the following:—

1300. E. T. Kirkpatrick, of Brussels. A new or improved mode of producing oxygen gas at the ordinary temperature of the air, or at a higher temperature. Dated 6th May, 1870.
1314. A. P. Price, of London. Improvements in the treatment of sewage, and in the production of manures. Dated 7th May, 1870.
1315. E. Guenin, of Covent-garden. Improvements in the manufacture of mustard and other plasters, and in machinery for the same. Dated 7th May, 1870.
1331. W. Hunt, of Castleford, near Normanton, York. A new or improved detergent compound to be used in the manufacture of soap, and for cleansing wool and woollen goods, and for other like purposes. Dated 10th May, 1870.
1394. G. W. Hennans, of Westminster. A process for the recovery, purification and revivification of sulphuric acid, spent and deteriorated in the refining of petroleum, coal, and shale oils. Dated 16th May, 1870.



1411. J. H. Payer, of Birmingham. Improvements in apparatus for the manufacture of phosphorus. Dated 17th May, 1870.
1463. J. J. Denoual, of New-cross, Surrey. Improvements in enveloping medicinal and other liquids. Dated 20th May, 1870.
1546. H. Blandy, of Nottingham. Improvements in the construction and arrangement of vessels employed in the manufacture of nitrous oxide gas, and for other similar purposes. Dated 27th May, 1870.
1562. A. Manbré, of Baker-street. Improvements in apparatus applicable to the conversion of cereal and vegetable substances into saccharine matter, in treating and purifying saccharine substances obtained from starch, malt, fruits, and vegetables, in treating fatty matters, and in the manufacture of chemical products. Dated 28th May, 1870.
1746. T. J. Smith, of London. Improvements in producing caustic soda and caustic potash. Dated 17th June, 1870.
1932. W. Marriot, of Huddersfield, York. Improvements in the manufacture of iron salts or compounds, and in the purification of gas. Dated 9th July, 1870.
2435. E. R. Southby, of Shotts, Lanark. Improvements in distilling mineral oils, and in apparatus therefor. Dated 8th September, 1870.
2454. T. Westthorp, of West India Dock-road. Improvements in the preparation of fibrous materials to render them suitable for use as lint for surgical purposes. Dated 13th Sept., 1870.
2469. H. Deacon, of Widnes, Lancaster. Improvements in apparatus for the manufacture of chlorine. Dated 13th Sept., 1870.
2476. H. Deacon, of Widnes, Lancaster. Improvements in the manufacture of bleaching powder by the use of chlorine, when diluted with inert gases. Dated 14th Sept., 1870.
2544. G. T. Bousfield, of Brixton. Improvements in the manufacture of hydrocarbon oils made from petroleum, bituminous coals, shales, schists, and other bituminous substances. Dated 22nd Sept., 1870.
- Specifications published during the month. Postage 1d. each extra:—  
1870.
630. J. C. Morrell. Treating Sewage. 10d.
640. W. E. Gedgc. Syringe for subcutaneous extractions and injections. 8d.
673. W. E. Newton. Injecting and spray apparatus. 8d.
793. F. A. Barrow. Evaporating, concentrating, and distilling liquids, &c. 8d.
819. G. W. Fox. Treating cod-liver, castor, and other oils. 4d.
860. S. Mawson. Apparatus for administering nitrous oxide gas. 4d.
943. J. H. Johnson. Preparing soluble phosphates of lime. 4d.
944. R. Scott and W. MacIvor. Treating mineral oils. 4d.
958. J. L. De Negróni. Stoppering bottles, &c. 4d.
986. A. Thomas-Anquetil. Treating oleic and stearic acids to obtain a pigment, &c. 4d.
989. J. Winter, junior. Apparatus for filling and stoppering bottles, jars, &c. 4d.
1010. J. Mayer. Specula. 4d.
1111. I. Baggs. White lead. 4d.

ATOMS.—California claims to raise better broom-corn than grows in the Atlantic States, and is sending a lot of it eastward by rail for trial.—A pane of glass seventeen feet by ten feet has just been set up in New York, and is thought to be the largest in the country.—The London *Chemical News* pays a just tribute to Prof. Cooke's "First Principles of Chemical Philosophy" in the following terms: "As far as our recollection goes, we do not think that there exists in any language a book on so difficult a subject as this, so carefully, clearly, and lucidly written."—Court-plaster is made by applying several coats of a solution of isinglass, with a little tincture of benzoin added, whilst warm, with a brush to a piece of silk stretched on a frame, each coat being allowed to dry before the next is put on.—Twenty-eight millions of barrels of petroleum have been obtained in Pennsylvania during the last ten years; and the product of the last year has been greater than in the height of the "oil fever."—The Sultan of Turkey has sent a commission to London and Paris, to study the methods of house-building in those cities.—There are 160,000 miles of macadamized roads in the British Isles.—One pound of coal can be made to evaporate, or convert into steam, fourteen pounds of water.—It is said that fluoride of potassium will remove ink-stains from cloth.—A French journal reports a case of twins, the mother being sixty years old.—A man has died in England at the age of 103, who took out a life insurance policy in 1799.—Several specimens of the condensed milk, now manufactured extensively in Switzerland, have been analyzed in England, and found to be perfectly free from adulteration.—A black-walnut tree was brought to New York from the West, which, when cut into veneers, was worth 27,000 dols.—The "Editor's Scientific Record" is a new feature, and a valuable one, in *Harper's Magazine*.—A French writer maintains that the iron used in the earliest times was of meteoric origin.—There are thirty-three medical journals in the United States (exclusive of those devoted to dentistry, &c.), six of which are published quarterly, twenty-two monthly, one semi-monthly, and four weekly.—Zell's *Popular Cyclopaedia* is now nearly complete.—From *Boston Journal of Chemistry*.



THE excited state of the commercial mind in England consequent on the Franco-Prussian war was not likely to be soothed by the rumours and indeed the imminent danger of further complications in which England herself would be one of the chief actors. In all probability the danger has now passed, but the manner in which this country met the crisis when it occurred, showed that the sneer which has been levelled against her so often of late years, that her courage was replaced by avarice, was false. There was no panic, no fear, and the earnest desire for peace which existed throughout all classes of persons, was tempered for the moment by the resolution that right and not might should prevail. Escaping from this we have still to regret that the year closes without much hope of immediate peace on the Continent. There is no doubt that this alone makes markets dull. There is an evidently fair demand for all kinds of produce, but there is but little spirit of speculation. The trade done is generally safe, but of no great magnitude. This continued quietness in the market, which cannot be described as depression, is nevertheless tantalizing to the reporters of commercial transactions. In chemicals the most noteworthy feature is the continued advance and present firmness of quicksilver and mercurials. In a very few months the metal has gone up from less than £7, and has now reached £10 per bottle. Bleaching Powder is firm at the last advance; Quinine also. Saltpetre has advanced and been in considerable demand, but is now quite dull again. It still, however, maintains advanced quotations.

The drug sales have "dragged" somewhat. Opium has been getting worse, and at this time is very flat. Castor Oil is held in stock for higher prices, and is a shade better. Shellac is quiet, and there is but little variation to note in gums generally. Camphor has advanced in consequence of the complete loss of a ship, laden with 3,000 tubs of the gum, bound from Japan to Holland. The quantity afloat, including this large cargo, was hardly equal to the average. Plumbago has slightly recovered from its excessively low price, but there is still an abundant supply; good qualities only will command a sale. China Rhubarb is reduced in price. Good quality, however, of this root still commands a good figure.

OILS.—Linseed has been more difficult of sale, and a further decline has ensued on the spot here, 29/ 10s being the present value. Business has been done for January to April at 31/, and 32/ was in one instance paid for a special make for the first six months next year. The demand for Rape has been subsiding and prices have slightly receded, 46/ having been accepted on the spot, and for the first four months 46/ has been paid for February-April, and there are sellers for the last four months at 44/. Refined on the spot is 48/ and fine Foreign 50/. Cotton Oil has been in little request on the spot at 32/ to 33/ as to make, but it has been firmer forward, a good quantity having been sold for delivery up to June at 33/ 10s, but refiners now ask 34/. The market for Olive is rather firmer, but little business has been reported. Tunis sells at 45/ 10s. Mogador is worth 45/ to 45/ 10s, and Gallipoli 48/ to 48/ 10s. There are buyers of the last description at 46/ 10s to 47/. Coconut has continued firm. There has been an improvement in the demand for Palm, and fine Lagos is still offered at 39/, 276 casks Loando in public sale were withdrawn. In Whale there is nothing doing for want of stock. Seal is in moderate demand. Cod offers at 35/ 10s.

PETROLEUM has been in fair request at 1s 6½d to 1s 7d for American refined, according to quality. Stock 21,355 barrels against 23,456 barrels same time last year, and the deliveries last week were 2,613 barrels against 2,233 barrels same period last year. Coal Oil 1s 3d to 1s 5d. Naphtha slightly firmer, holders demanding 9½d per gallon.



Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mining-lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.]

CHEMICALS.

Table of chemical prices for 1870 and 1869. Columns include item name, unit, and price in shillings and pence for both years.

Table of drug and commodity prices for 1870 and 1869. Columns include item name, unit, and price in shillings and pence for both years.



